

Rock Products

DEVOTED TO
Concrete and Manufactured
Building Materials

Volume X1.

CHICAGO, ILL., NOVEMBER 22, 1911.

Number 5.

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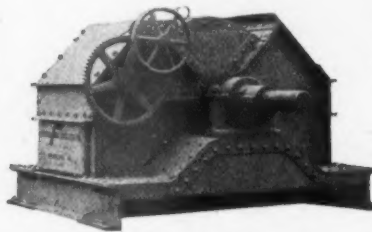
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Rock Products

DEVOTED TO
Concrete and Manufactured
Building Materials

Volume XI

CHICAGO, ILL., NOVEMBER 22, 1911

Number 5

NOVEL SAND AND GRAVEL PLANT

Recently Erected Washery of Gallagher Brothers at Port Washington Presents Interesting Features and Is One of the Best Equipped Plants of Its Kind in the Country.

One of the best equipped and operated sand and gravel plants in this country is that owned by Gallagher Bros. Sand & Gravel Company, Port Washington, Long Island, N. Y. All the work of the plant is done by the Webster method, and since installing this method the firm has had little or no trouble in successfully operating the plant. The Gallagher brothers, John J., Peter C. and Frank E., handle the three very necessary corners of a big business in supplying sand and gravel to the contractors and constructors of New York City and vicinity. John operates the plant, Frank runs the home office and Peter attends to the sales work in the big city.

In 1909, when banks that had formerly been used at Manhasset became exhausted, the present property of nearly 300 acres in sand and gravel land was acquired on Hempstead Harbor inlet, five miles from Long Island Sound. Here there is about nine feet of water at high tide and at low tide the boats at the shipping dock settle in the mud to await the return of the waters. It has been found that by arranging carefully the time of arrival and departure of the boats that very little time is lost by having to wait for high tide.

It was a difficult problem that the three brothers had to contend with. A plant of large capacity was needed and it was finally decided to install the Webster machinery. This was done and a new and practically perfectly equipped gravel washing was built next to the old one.

The working equipment at the present time consists of the sand plant, shown in the photograph, the gravel washing, also pictured, and the aban-

doned gravel plant between these two. The material is brought from the rear of the plant, where it is loaded into dump cars by steam shovels in the two pits, which gradually will work together into one. Steam locomotives haul the cars in pairs to a hopper, where their loads are dumped for delivery to the sand house, which is shown in one of the accompanying photographs. Separation is made into four grades: dry-screened sand, washed sand, tor-



VIEW FROM GRAVEL WASHERY LOOKING TOWARDS SHIPPING DOCK ON HEMPSTEAD HARBOR.

pedo sand and gravel. Material carried to the top of the sand house is passed dry over 3-16 inch gravity screens, the fine material dropping into pockets beneath. The coarser parts, gravel and boulders, are chuted to a hopper feeding a 24-inch Webster belt conveyor leading upward to the top of the washing plant, where quick delivery is made into a large receiving hopper. Water from a large duck-

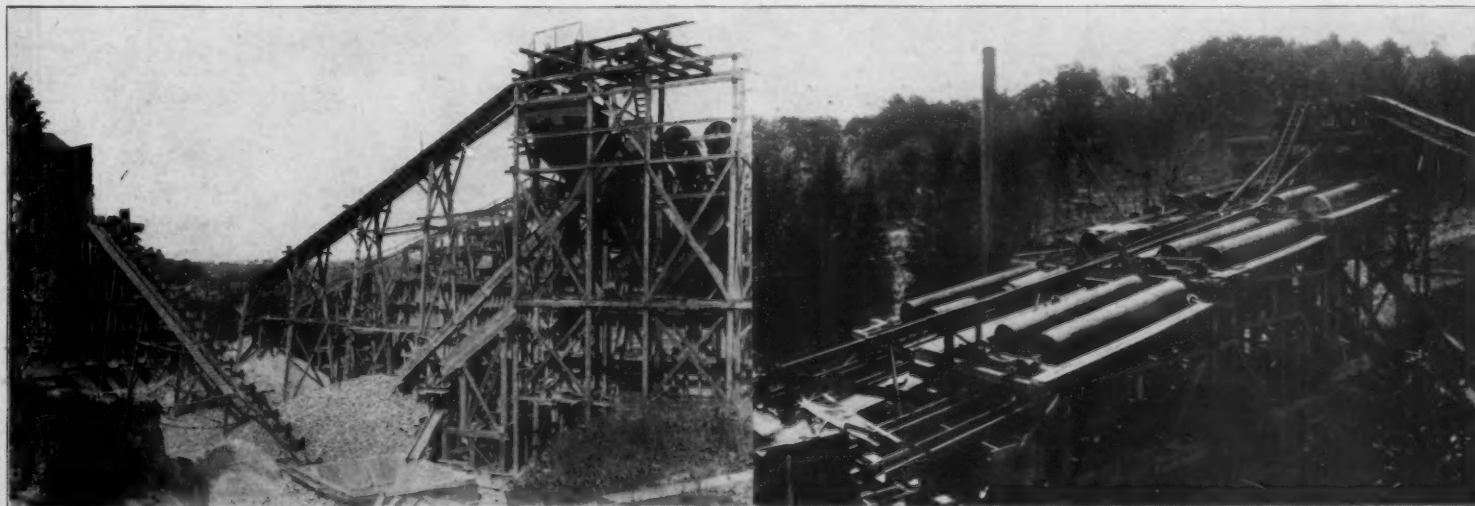
bill nozzle flushes the material into and through the screens.

All the screens are of the Webster cylindrical type, 48 inches by 16 feet in size. There are twelve of these screens, arranged in four sections of three screens each. So far only two of these four sections have been placed. The other pair will be erected later, together with a 24-inch Webster belt conveyor to bring material direct from the bank to the screens. Then the washery can be fed from the sand-house or from the bank, or both, giving any desired proportions of dry and washed sand.

The material passing through the first screens, with their $\frac{3}{4}$ -inch perforations, is flushed into the second or $\frac{1}{4}$ -inch screens, the rejections from which are spouted to the gravel pockets. Similarly the third screens, $\frac{1}{8}$ -inch, take out the torpedo sand and pass the fine sand and water on to settling tanks, whence the water is drained away. Boulders tailing from $\frac{3}{4}$ -inch screens are chuted to the crusher, where they are broken and dropped into a hopper which feeds a belt conveyor leading back to the top of the sand house, whence the material is again shunted to the screens.

At the lower ends of the second and third screens are back-jets of water which are very effective in cleaning and brightening the gravel and torpedo sand as they tail out. And in the chutes to the pockets are placed perforated metal screens on which the material is retarded to drain away the water. Power for the gravel washing is supplied by a Webster method rope drive from a 100-horse-

(Continued on page 45.)



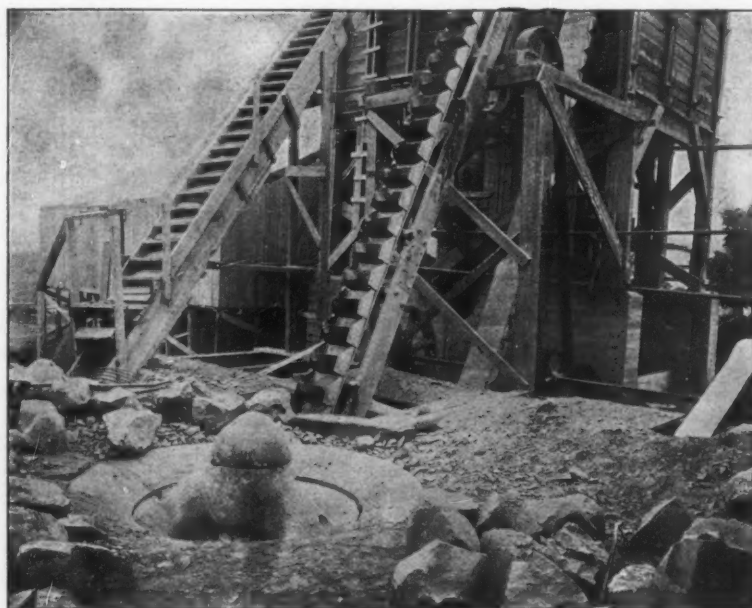
SAND HOUSE AND GRAVEL WASHERY SHOWING BELT CONVEYOR AND CRUSHER AND METHOD OF SEPARATING THE DRY AND WASHED PRODUCT.

LOOKING DOWN ON THE GRAVEL SCREENS SHOWING THE COURSE OF THE GRAVEL.

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On the Panama Canal 80 per cent.
 On the Catskill Aqueduct 75 per cent.
 On the New York State Barge Canal, 50 per cent.
 of all the ROCK CRUSHING is being done with

McCULLY GYRATORY CRUSHERS



McCully Gyratory Crushers at Work on the Catskill Aqueduct Near Newburg, N. Y.

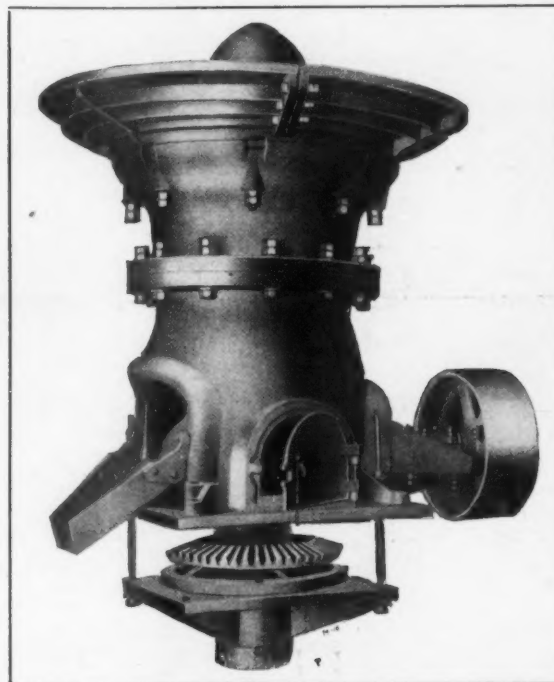
Of course these are exceptionally large jobs.

That is just why we mention them. There are a great many different contractors involved and it is evident how many of them agree as to which is THE crusher. Moreover it is for such large jobs that the greatest care is taken to select the BEST crusher. Only the best is good enough.

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Over 50 McCully Crushers
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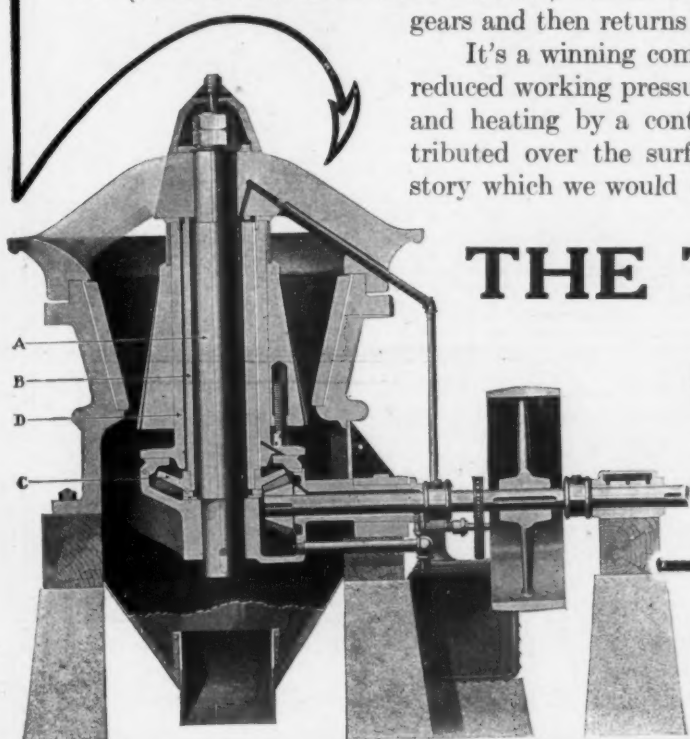
The Crusher's Life Blood is Oil.

Rock breakers work under most trying conditions, continually enveloped in a cloud of dust. It is very difficult, even with the "tightest fit," to exclude dirt from the running parts. The bearings are subject to immense pressures, very irregularly applied. When you add to these unfavorable conditions the further danger of careless supervision, any mechanic will admit the vital importance, to the practical quarryman, of the automatic oiling system peculiar to the

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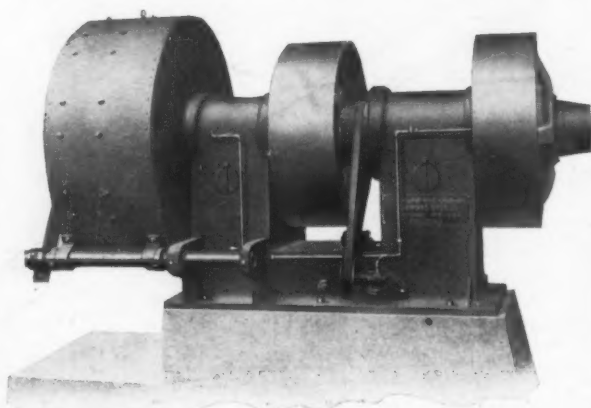
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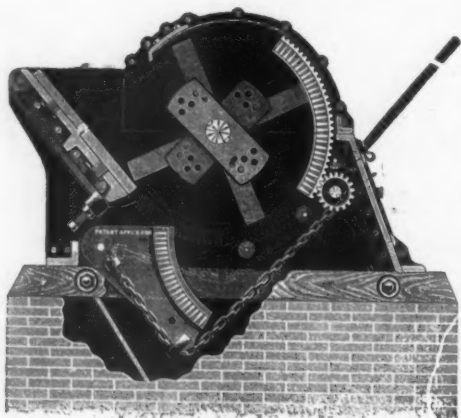
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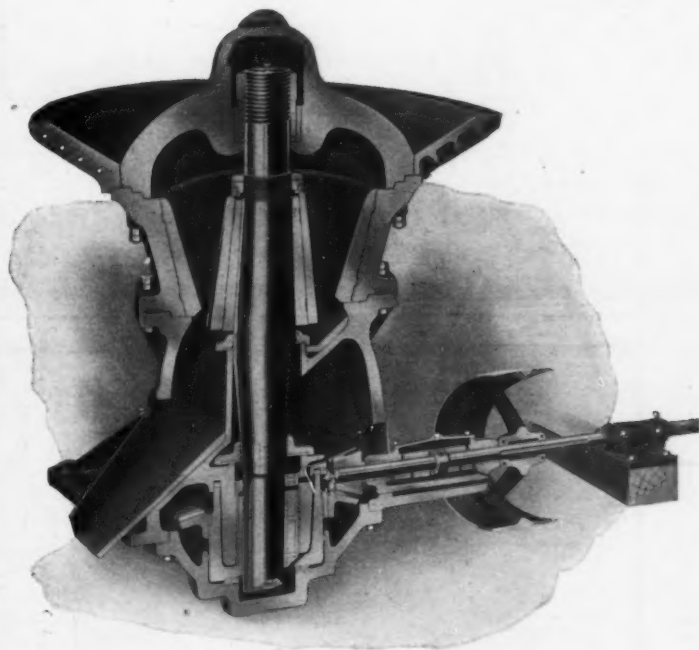
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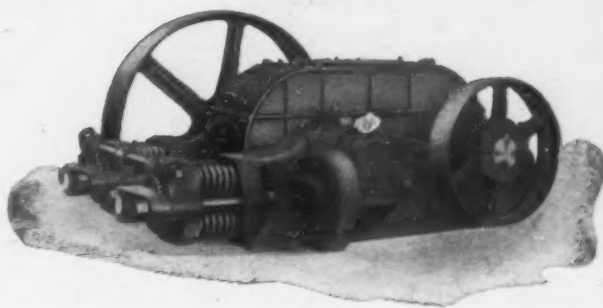
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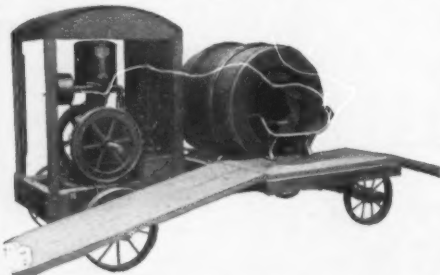
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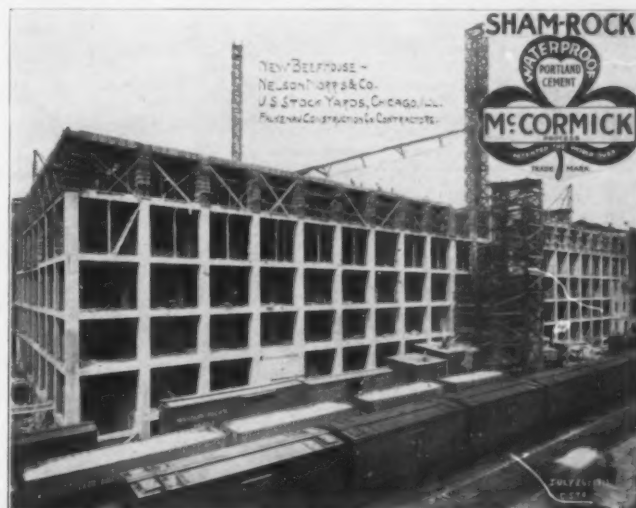
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Can be thoroughly soaked in one day in place of seven. Carries more sand, gauges with one-third less plaster, spreads further and easier than lump lime and it will not airslack.

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Celebrated Cheshire "Finishing" Lime

Well known throughout New York and the Eastern States as the finest finishing lime manufactured. The special feature of this lime is its quick and even slacking, thus preventing any cracking or checking when put on the wall. It is the best lime used in the country today for all

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Hydrated Lime

Bulletin No. 42

When Do You Intend to Install That Hydrating Plant?

Can you afford to neglect doing so any longer? You know, we all know that a general use of hydrated lime will increase the lime business many fold.

The dealer must have a product that can be held in stock indefinitely. The dealer must make a legitimate profit. He must be able to depend upon doing so. He is not willing to push any commodity on which the profit is a gamble. Can you blame him? There are thousands of dealers throughout the country. How much lime do they sell? Is it not to your interest to make it to his interest to handle more?

If every dealer was informed of the manifold uses of Hydrated Lime, was told whom to sell, who were his legitimate customers, such as the tanneries, the grease works, the chemical works, etc., (Oh, the list is too long to particularize, but we merely wish to mention a few lines that he now ignores), do you not think he would handle more lime than he does now? Would he not buy in larger quantities, get better prices and better rates, when there is no possibility of his product deteriorating by holding?

It is Only a Question of Time

when you **will** install a Hydrating Plant. It is to your interest to do so. It costs no more to make Hydrated Lime than quick Lime. The cost of installation is not heavy. The increased sales will soon pay for the cost of installation, then

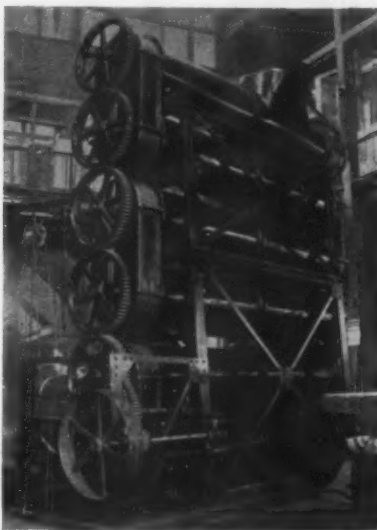
Why Hesitate

Why put this off any longer? If a campaign of publicity was entered upon by the lime manufacturers, exploiting Hydrated Lime, if every dealer in the country was fully informed of all its uses, the demand for lime would be increased to such an extent that it would be simply impossible to meet it with the present facilities. Every lime manufacturer knows this, or should know it. He would know it if he investigated the subject thoroughly, and it is our purpose to induce him to do so.

To convince one's self, against one's will, is to convince one's self indeed. Investigation will convince you. It will put money in your pocket also. Let us give you more facts along this line.

The Concrete Worker

also reaps many benefits by using Hydrated Lime. By its use
The concrete works easier under the trowel, hence
It is a time saver, and consequently
Less men can accomplish more work.
It prevents the mortar drying out too quickly.
It improves the color of the finished work.
It makes the concrete impervious to water.
It improves the strength.



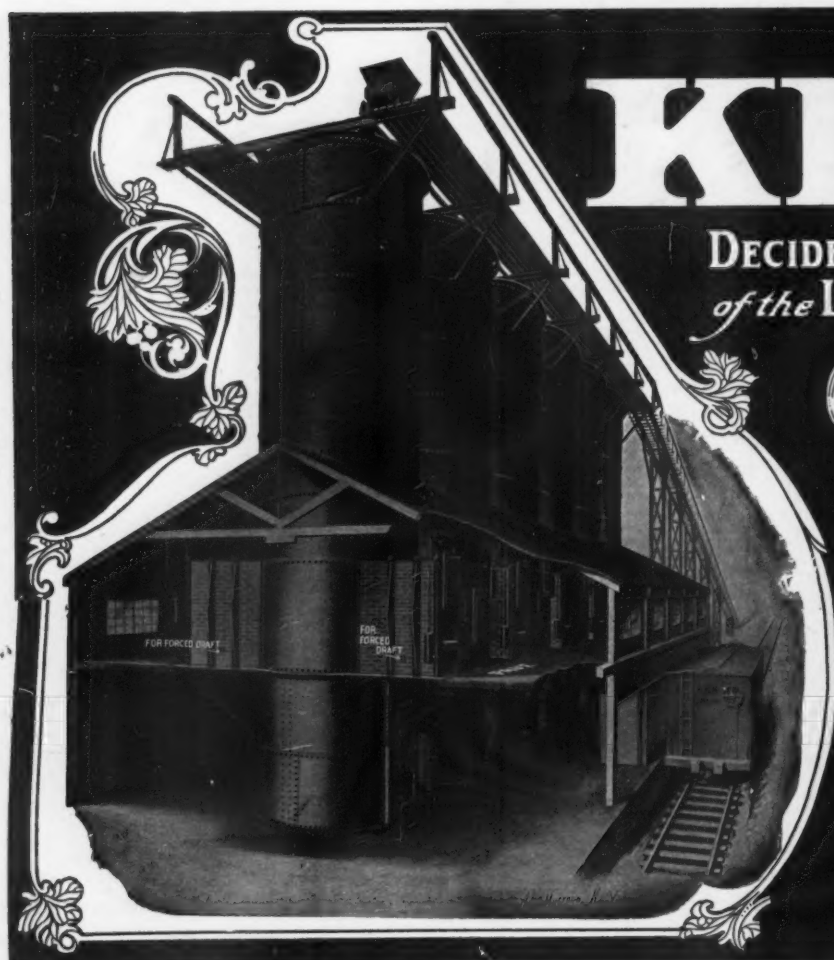
KRITZER CONTINUOUS HYDRATOR.

Our Business

is the Designing and Constructing of Hydrating Plants. By Our Process, The Kritzer Way, you will obtain a Perfect Product. We Guarantee this Absolutely.
It takes about three or four months to build a plant. Do not lose valuable time.
Why not take this matter up with us Now, and get ready for business as soon as possible.

The Kritzer Company
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KILNS

DECIDE *the* EARNING CAPACITY
of the LIME MANUFACTURING PLANT

THE KEYSTONE LIME KILNS

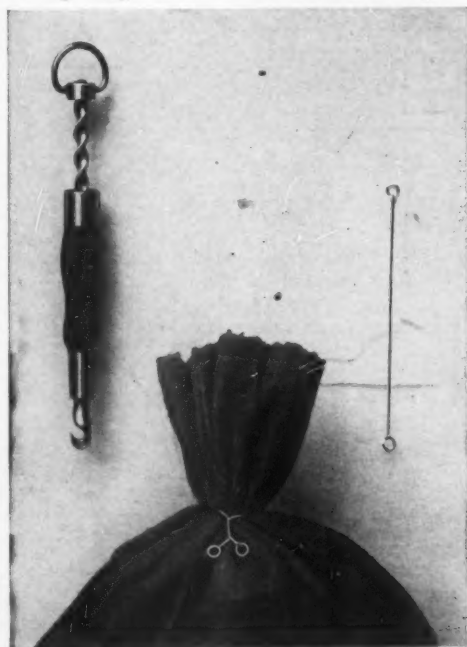
*are famous money makers
and express the highest type
of modern development.
There's none quite so good,
and the price is right.*

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WILL BE CHEERFULLY FURNISHED

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MANUFACTURING CO.
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The wire tie is absolutely secure, quicker in operation, more uniform and cheaper than twine.

It is opened by simply untwisting, no knife can be used—no cut bags.

Eliminates sore hands. Can be used rapidly by green men.

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THE VALVE BAGGER

A device unequalled for sacking these products. Your inquiries will have our prompt attention.

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Genuine Bargains In Lime Kilns

In the purchase of any article where staying power is involved, it is the worst extravagance to buy something which is merely "cheap."

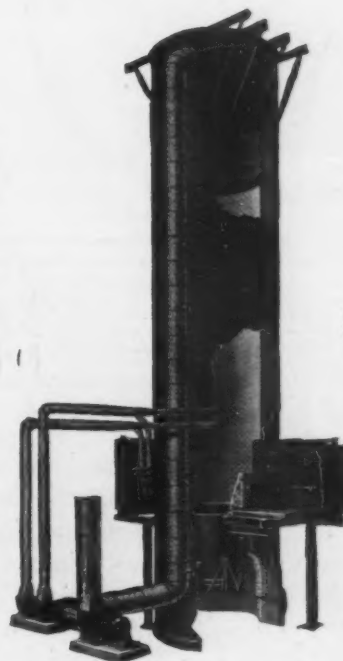
The genuine bargains today are those which show the lowest cost per year over a period of years. You should buy for the future.

Doherty Lime Kilns are the least expensive kilns you can buy, for they are built to last under the exacting conditions of lime plant operation — not merely to sell.

IMPROVED EQUIPMENT CO.

COMBUSTION ENGINEERS

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The Country Will Soon be Covered With
SNOW
and the Buildings With

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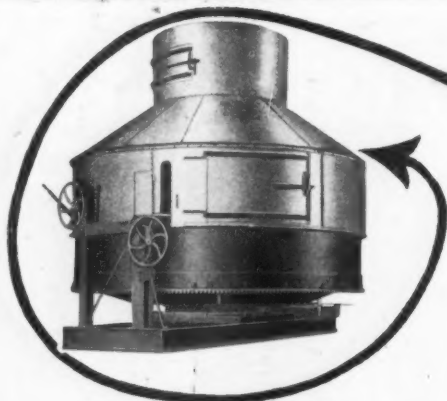
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A Machine That Outgrows Its Capacity Every 2 Years.

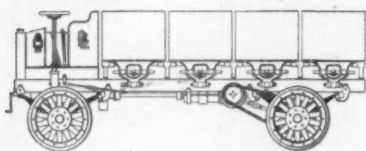
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Patentee and Sole Manufacturer.

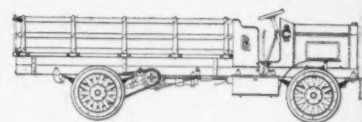
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(Made in Louisville.)

Both types made in three and five ton sizes.



Not assembled but designed and manufactured complete in our own shops. (We buy only the chains, roller bearings and muffler. Castings made from our patterns.)

After eight years of experience in the Automobile business, both mechanically and commercially, we have in the "Longest" truck selected those points of construction which have proven themselves by test to be right.

Examine our various selections in construction, compare them with the best points in other leading trucks. We have not experimented. Only tried out and approved principles have been adopted.

Our first truck was exhibited at the Louisville Automobile Show in March, 1910. Since then a thorough test has convinced us that we have a first-class article which we can recommend in every respect and which will stand the tests of time.

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Use the World's Only Successful Substitute for Dynamite

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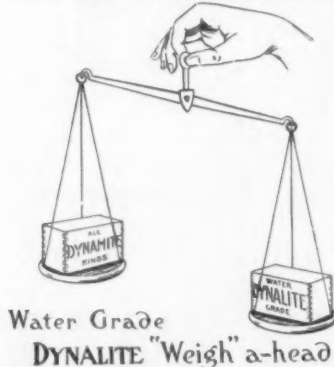
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TWO PATENTS

For Crushed Stone and Silica Sand Quarries, Contractors, Stump Blasting, Ore and Slag Shooting, Clay and Shale, Oil and Gas Wells, Etc.

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WEIGHING THE POINTS OF SUPERIORITY



Water Grade
DYNALITE "Weigh" a-head

Safer and Better Than Dynamite. Does Not Explode by Overheating. No Illness.

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**GREATEST ROCK
BREAKING POWER**

**IS WHAT YOU
WANT**

**INDEPENDENT
DYNAMITE**

**WILL SAVE YOU MONEY
AND PLEASE YOU
EVERY TIME**

Independent Powder Co.
of Missouri

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MAKE YOUR EXPLOSIVES PRODUCE MAXIMUM RESULTS

The way to do this is to assure yourself that you are using the *Right Explosive in the Right Place*.

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Provides a special explosive for every known condition met with in blasting work, and each one is the best for the purpose that can possibly be made.

Are you sure you're using the one particular explosive that is best suited for your work? Are you sure that your people are posted on the best modern explosive practice? If there's a doubt, why not let our experts help you out. Their advice is free.

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GLASS SAND
ROCK, CLAY
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We have equipped the largest plants in existence and our dryers are operating in all parts of the world. Write for list of installations and catalogue S. C.

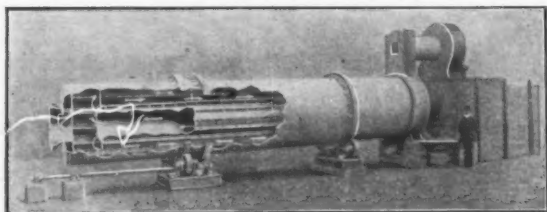
American Process Company
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**FUEL COST OF DRYING SAND
2 3-5 CENTS PER TON**

IN

RUGGLES-COLES DRYERS

AT A LARGE PLASTER PLANT



The above illustration shows the actual dryer cut away. Note that the hot gases pass through inner shell then back between the shells meeting the sand passing in **opposite direction**. This dryer by test showed an efficiency of 81.1%. One important reason **why** was because the exhaust was only 90°F.

Write for name of plant and copy of test

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50 CHURCH STREET, NEW YORK. McCORMICK B'L'D'G. CHICAGO.
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A beautiful product adapted to ornamental artificial stone work of the highest grade.

For exterior and interior work. Stainless.

Equal or Superior to any other White Portland known.

Guaranteed to pass standard specifications.

Before placing orders do not fail to get our free illustrated booklet and samples of

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(Makes concrete absolutely impervious to water)

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THE CUMMER DRYERS

For Mechanically Drying Everything. The F. D. Cummer & Son Co., Cleveland, O.



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Excellent Results Moderate Cost and Expense of Operation.

In sending for prices and printed matter describe your material fully, giving its percentage of moisture, required hourly capacity, etc.

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Use Our
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Lime Kilns and Plant of Blair Limestone Co.,
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Designed by

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42 N. 16th Street Philadelphia, Pa.

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ROCK PRODUCTS

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DEVOTED TO CONCRETE AND MANUFACTURED BUILDING MATERIALS.

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Copyright, 1911 by E. H. Defebaugh.

Our article on Paint and Varnish is one of vital interest to the retailer of builders' supplies. Paint and varnish is as much a building material as cement, and every retailer of builders' supplies can handle this line with profit and satisfaction.

The attacks being made upon concrete by rival interests only tend to strengthen the position of concrete. The increase in the consumption of cement proves conclusively that the industry is founded so firmly that nothing that can be said can stay its progress.

It is to be hoped that at the coming meeting of the cement manufacturers at New York City the warring factions will come together on some kind of a peace basis. There is no sane reason why the producer should give his cement away. The consumer is perfectly willing to pay a fair profit, and in fact, would rather do so, since he is well aware that no industry can exist for long without a profit. The fight among the cement companies has not resulted in increasing the use of cement to any appreciable extent. With the increase in consumption going forward by leaps and bounds, it would be a comparatively easy matter for the cement companies to raise their prices without causing anyone the slightest hardship.

The coming meeting of the National Builders' Supply Association, which will be held at New York City during the cement show, ought to be the most largely attended meeting of this association since its inception. It has been several years since the association met in New York City. As every wide awake retailer wants to visit the metropolis at least once a year, he should make his preparations to go to New York at this time. If every retailer would feel that the success or failure of the organization rested upon his shoulders, we are quite sure that he would make it his business to attend. The association has been a very potent factor in the development of the building material industry in the past, but its work has just begun. There are many problems confronting the industry today which could be solved by co-operative effort. The manufacturers and wholesalers stand ready to co-operate with the retailers in any laudable manner which they might indicate. We hope that every retailer of builders' supplies who can possibly spare the time will make it his business to attend this meeting.

Despite the pessimists, the year 1911 will go down in history as one of the largest building years that this country has ever known. Most of

the alleged hard times really exists in the minds of the people. The average man is prone to think that because the trusts are being dissolved that the country is going to ruin. As a matter of fact, things never were in a more prosperous condition than they are today.

There are millions of dollars invested in the sand and gravel business. An organization of some kind has long been felt to be a necessity. The production of sand and gravel is in most instances a purely local proposition and yet the producers have much in common, and a National Association founded on broad lines will be the means of enabling them to correct many of the existing abuses in the trade and be of great educational value. The National Association could father the special interests such as the producers of molding sand, glass sand, etc., and also the local organization which is so badly needed in many localities. A meeting will be held at the Auditorium Hotel, December 15 and 16 for the purpose of forming a National Association. This meeting will attract all of the producers in the West, South and Middle West. Another meeting will be held a month later, on January 31, at the Hotel Astor, New York City, at the same time and place as the meeting of the National Builders Supply Association, and coincident with the New York Cement Show. This second meeting should attract the attention of the Northeastern, Southeastern and Eastern producers. The result of the two meetings ought to be the formation of a strong National Association.

From the earliest history of man we have learned the lesson of "in union there is strength." Searching back through the musty records of time, we are confronted with the fact that the first signs of reasoning on the part of prehistoric man were their gathering together for mutual protection and so down through all time no great act has been accomplished without a combination of forces. It is doubtful whether man would still be on this earth at all if they had not learned this early lesson, because it is very evident that at the time man put in his first appearance the animal creation stalked the earth and held undisputed sway and it was only by united effort that man was able to wrest the plains and the forest away from the animal kingdom. In the early history of the world might was right and up to a few hundreds of years ago, men banded themselves together for but one reason, that of conquering some nation and subjecting them to their will. But in this enlightened age we combine for the purpose of commercial supremacy. There is no one but who has learned the lesson taught in the school books of the father who brought home to his child's mind the value of co-operation by the illustration of breaking the single switch whereas the bundle of switches remained unbroken.

Preparations are going steadily forward for the first of the three great cement shows which will be held in New York, beginning January 31st and continuing throughout to February 3rd, inclusive. In looking over the list of exhibits one is struck with the fact that the most prominent manufacturers of concrete machinery and products will be present. The exhibits will be pitched on a high plane and great attention will be paid to the educational side, which can result in but one thing—greater interest by the general public. While these shows are primarily intended to interest the engineers, contractors, architects and retailers, there is also a broader and more potent reason for the exhibition in that it arouses greater interest in the minds of the masses and gives them a better understanding of the uses and value of concrete construction. Considerable interest has been aroused in the uses of concrete by the advocates of conservation because there is no better way to conserve the property interests of the country than by fire prevention and there is no better method of preventing fire than by the intelligent use of concrete construction. This will be the last show held in the historical old Madison Square Garden. A great many people will want to visit this interesting old pile which has housed so many great gatherings and which holds a sentimental interest for the public.

EDITORIAL CHAT

William Meyer, son of W. D. Meyer, the well known stone and lime man at Quincy, caught one of his legs in a patent dumping wagon and the small bone was fractured.

Richard L. Humphrey, the president of the National Association of Cement Users, will return from Europe in a few days and will shortly thereafter take up the subject of the next annual meeting of the association.

Eugene Y. Sayer, vice president and general manager of the Improved Equipment Company, 60 Wall street, New York City, was a recent visitor to Chicago. His company has made several installations recently and Mr. Sayer reports business on the whole very satisfactory.

George F. Schwarz, a member of the firm of Ricketson & Schwarz, jobbers in brick and building material, Milwaukee, was a member of a party of Milwaukeeans who sailed from New York on November 8 on the Cunard liner, Lusitania, for Liverpool. Mr. Schwarz will return to Milwaukee about December 15.

Paul Jandernal, the Lehigh's crack Ohio salesman, was in Chicago the other day looking "fat and sassy." Those who have been accustomed to seeing Paul looking like a race horse will hardly be able to recognize him now. Married life seems to agree with him. He says Lehigh sales in Ohio run higher than ever this year and the outlook is more than encouraging.

It is Alderman B. J. Campbell once more, if you please. In the election of November 8 the well-known president of the Kentucky Wall Plaster Company once more benefited by the Democratic upheaval and is a member of the board of city fathers for his second consecutive term. Mr. Campbell is an able executive and one of the best-known business men in Louisville.

We heard from our old friend Tom Magiff, sales and traffic manager of the Knickerbocker Portland Cement Company of New York City, last week way down in Jacksonville. Evidently Tom is not down there for his health, although Jacksonville is one of the garden spots of the United States at this time of the year. Tom is evidently establishing connections up and down the coast for the Knickerbocker plant, which is located on the Hudson river and has splendid shipping facilities. Despite the fact that the Knickerbocker has only been on the market for a short length of time, they already shipped from the date of opening to October 31, 101,000 barrels. Knickerbocker is no longer a new cement, for it is now being used in very important works, such as U. S. Navy, U. S. Engineering work at Boston and in all the departments in New York City. Among the most important jobs might be mentioned 15,000 barrels for the Boston baseball stand, work on the Boston & Maine Ry., N. Y., N. H. & H. R. R., Boston and Albany Ry., Central Vermont Ry., and others. The cement is meeting with general approval.

GOOD CAUSE FOR GRIEF.

O'Toole—An' why are yez wearin' mournin', Muldoon?

Muldoon—Shure, an' Oi hov t'. Th' iditor ov a magazine O'm takin' wrote me yisterday an' sed that me subscrishun hed expired.—Judge.

BERT SWETT GIVEN FAREWELL DINNER.

Most of us think we are very fortunate if we get our regular Christmas and Thanksgiving dinners at the prescribed time and in the approved manner, but when a man in the cement business goes up three or four steps at a time in the estimation of his company there is nothing to do but give him a "swell feed" and send him to his new position with nothing but regrets for the ones he left behind. So think the members of the trade who gave a farewell dinner to Bert Swett, of the Lehigh Portland Cement Company, at the Hotel La Salle, Chicago, November 18. Bert is going to take the position of eastern sales manager for the Lehigh at New York, and will leave Chicago about the 23rd of this month. C. H. Mateer, secretary of the Illinois Association of Municipal Contractors, was one of the men who originated the

idea of giving Bert a dinner. Mr. Swett has been in the cement business for about 16 years, starting with the Atlas Portland Cement Company when he was but a boy. He stayed with this concern for about eight years, and then went with the Lehigh as salesman in Illinois. He worked his way up and a few months ago was appointed assistant western sales manager at Chicago. His present appointment followed, and Mr. Swett is to be congratulated on the remarkable strides he has made in the business in the past few years. He has made friends, many of them, in all parts of the country and in every phase of the business. Contractors probably know him as well as any, as this was the class of trade that he sold to for a long time.

The little dinner the other night was an evidence of the esteem in which Mr. Swett is held, and everything that took place there spoke of the great friendship for Bert by the contractors and others in attendance. Besides Mr. Swett, the following prominent men were there: C. E. Mateer, secretary of the Illinois Association of Municipal Contractors; G. C. Osborn, president of the Berea Sandstone Company, Cleveland, Ohio; F. W. Lucke, brick dealer, Chicago; William Howe, Puritan Brick Company, Galesburg, Ill.; F. L. Kinney, Ohio sandstone Company, Chicago; W. P. Whitney, president of the Danville Paving Brick Company; W. H. Hill, Murphysboro Brick Company; E. W. Middleton, Barr Clay Company; I. D. Lane, Bloomington, Ill.; S. A. Tuttle, Decatur, Ill.; John Kelley, East St. Louis; A. H. Baer, Belleville, Ill.; and J. N. Twitchell, Belleville, Ill.

The six-course dinner was fully appreciated by Mr. Swett as well as the others, but the friendship



BERT SWETT, NEW EASTERN SALES MANAGER
LEHIGH PORTLAND CEMENT COMPANY.

talks and evidences of commendation for his work were the best points of the evening's entertainment. Mr. Swett gave a short talk in which he thanked his friends, and said that he was sorry to leave them and wished he could take them all along. Of course we are not to lose him altogether, as from time to time he will visit Chicago in the interests of the company and will probably be in attendance at most of the conventions. Many persons who were not able to attend because of various reasons sent telegrams of congratulation and expressed their regret at being compelled to miss the gathering.

There is no use saying, as is usual in a case of this kind, that we hope Bert will make "good," because it is not in him to do anything else, and far be it from us to put any obstacles in his way as harm is more liable to come to the obstacles in question than it is to Bert.

Mr. Swett already knows the territory that he is going to supervise and is acquainted with most of the men. Therefore all that remains for him to do is to take the orders as they come. We do not mean to convey by this that there will be no work attached to his new position, because there will be, and the hardest kind at that, but work is just so hard as one makes it and Bert never did have any trouble, not even with getting away with a long-winded speech.

History Makers of the Building Material Industry

It is our pleasure to present to the readers of ROCK PRODUCTS this month a speaking likeness of one of the most prominent figures in the cement industry today. It can be said with all truth that he is indeed a maker of building material history. A. F. Gerstell, the president of the Alpha Portland Cement Company of Easton, Pa., is already a figure of commanding prominence in the cement industry, although he has been in the business but twelve years. Still, however, when the fact is taken into consideration that the cement industry in this country is still young, he perhaps has been in the business as long as most of the heads of the present day companies. Measured by the length of time that it takes to build up other industries of like magnitude, twelve years seems to be a short space of time.

Mr. Gerstell is still a young man, shrewd, kindly and forceful, possessed of great executive ability and a man born to lead. In studying his face one is struck with the fact that there is a striking resemblance to John D. Rockefeller, the multimillionaire oil magnate, and there is a further significance in the fact that Mr. Gerstell was formerly connected with the Standard Oil Company in various capacities.

He was educated as a civil engineer and followed this profession for a number of years. He severed his connection with the Standard Oil Company twelve years ago and joined the Alpha Portland Cement Company as vice-president and general manager, in which capacity he served until 1909, when he was made its president. At the time Mr. Gerstell joined the Alpha Company the plant had a capacity of between 700 and 1,000 barrels per day. The plant was located at Alpha, N. J., about seventy miles west of New York City, on the L. V. Railway.

Owing to the superior quality of the cement, the business grew rapidly and soon the company was unable to meet the demand. In 1900 a new plant was erected alongside of the old one at Alpha and at this point the company is now manufacturing some 6,500 barrels of Portland cement per day. The Alpha Company also purchased outright the Martins' Creek Portland Cement plant which is located on the Delaware river some eight miles north of Easton.

As the demand still continued to be greater than the supply, about six years ago, the company still further increased its capacity by purchasing the National Portland Cement property. This mill is only 1,500 feet away from the Martins' Creek mill. These plants at Martins' Creek have direct connection with the D. L. & W. R. R., the Pa. Ry. and the L. & M. E. Ry. At the two Martins' Creek mills the company is producing 8,000 barrels per day.

In the latter part of 1908 the company still further added to their capacity by purchasing the Buckhorn Cement Company, located at Manheim, W. Va., on the M. & K. Ry., a distance of about two miles from the junction of the main line of the B. & O. Ry. The material used at this plant is limestone and shale and it has an output of between 1,500 and 1,800 barrels per day. The next year the Alpha purchased the entire stock of the Catskill Cement Company, located on the Hudson river, 100 miles north of New York City. This plant also has direct connection with the Lake Shore Ry. At the Catskill plant they are at present producing about 1,500 barrels per day. Preparations are now being made to increase the capacity of this plant to 3,000 barrels per day.

As will be seen, the total production of all the mills owned by the Alpha Portland Cement Company is now about 7,000,000 barrels per year. It will be seen by this slight resumé of the Alpha Portland Cement Company's properties that Mr. Gerstell is a very potent factor in the cement industry today. Those who know him well predict a still greater future for him, as he is possessed of an indomitable will, and, although modest to the extent of being retiring, he is a man to be reckoned with in the future of the cement industry.

Bert Swett, who has occupied the position of assistant western sales and traffic manager under Fred Paulson, has been appointed eastern sales manager of the Lehigh Portland Cement Company, and will leave this week for New York City, where he will hereafter make his headquarters. While Mr. Swett's many friends in the West regret to see him leave, they are naturally gratified at his promotion and join with ROCK PRODUCTS in extend-

ing him their sincere congratulations. As a token of esteem from his fellow workers in the Lehigh office, he was presented, just before his departure, with a beautiful gold watch and chain. Bert will no doubt be heard from in the East, where he will make his advent felt before long.

Ralph C. Rinke, chemist and cement expert, Allentown, Pa., died on October 10, aged 29.

Harry P. Apkin, a member of the retail building material firm of Apken & Son, of Petersburg, Ill., and Miss Pearl E. Shipley, also of Petersburg, were married in that city November 7.

The editorial sanctum of Rock Products was honored by a visit this month from H. C. Day, vice president, and H. C. Baker, secretary and treasurer of the Ogden Portland Cement Company, of Ogden, Utah.

An address on "The History and Manufacture of Portland Cement" was recently delivered before the Minneapolis Architectural club by Ernest S. McGowan of the Universal Portland Cement Company.

Announcement is made of the resignation of V. O. Johnston as the general manager of the Lincoln Sand and Gravel Company, of Lincoln, Ill., a position which he has held for four years, being one of the original promoters of the business and a heavy stockholder. Under his term of office the business of the company has grown to an output of thirty or more cars per day and is recognized as one of Lincoln's chief industries and one of the largest in the state of its line. Mr. Johnston will continue to reside in Lincoln, retaining his stock interest in the company and being one of its directors. He states that he will remain in the sand and gravel business, acquiring a plant of his own.

Attempting to guide his automobile past a carriage as both were crossing a culvert on the outskirts of Chester October 29, John McGraw, of 3810 Walnut street, and one of the best known and most successful builders of Philadelphia, was thrown from his machine and received injuries that caused his death a few hours later in the Chester Hospital. Mr. McGraw, who was fifty-six years old, was a pioneer in the extensive two-story construction in West Philadelphia, and had the reputation of having built more houses of that character, especially in West Philadelphia, than any other contractor in the city. He was called "The Father of the Two-story House." He was also interested in other concerns, and was president of the American Cork and Seal Company and vice president of the American Brick Manufacturing Company.

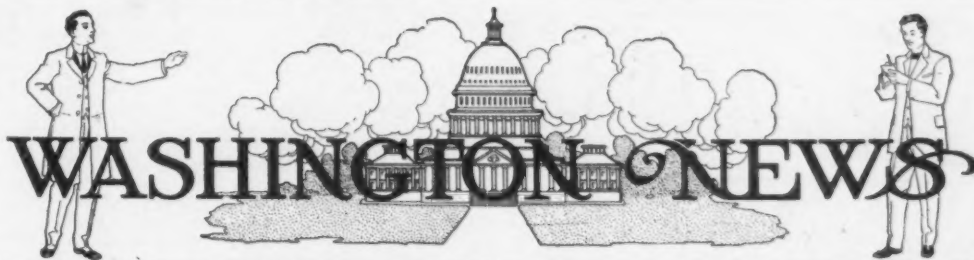
THE KRITZER COMPANY BUSY.

Charles Kritzer, of the Kritzer Company, hydrating plants, Chicago, stated concerning business conditions: "Business is pretty good right now and everything is looking bright. We are engaged in constructing several plants in different parts of the country and find that the demand for hydrated lime is growing daily."

The Kritzer Company is just getting ready to ship the machinery for the new plant of the Potomac Refining Company, Harper's Ferry, and for the plant of the Basic Products Company, Kenova, W. Va. Both of the plants were built by the Kritzer process. The plant of the Knickerbocker Lime Company, at Philadelphia, is practically completed now, and it is probable that it will be put in operation in a short time.

MISTAKEN IMPRESSION PREVAILS.

The Pennsylvania Crusher Company, Philadelphia, Pa., in a recent communication says: "It has come to our attention that a mistaken impression prevails in some quarters, relative to the extent of the court decision in a litigation which we have recently had with another company. We find that some users have been led to believe that the Pennsylvania Crusher Company can no longer make hammer crushers. This is not the case. As a matter of fact, easily verified from unprejudiced sources, the loose arm or swing hammer principle, involved in all makes of hammer crushers, has been public property for many years. On the other hand, various devices of wear adjustment are patented. Our adjustment is patented, and experience has demonstrated it to be distinctly superior. The one element which the court adjudged was infringed has been so improved that it does not now infringe."



WM. B. BARR, WM. WOLFF SMITH, E. H. PULLMAN
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OUR WASHINGTON BUREAU.

The National Government is in such close contact with every line of business that a reliable source of information located at the Capital is everywhere regarded as invaluable. ROCK PRODUCTS maintains at Washington a fully equipped and highly efficient news and information bureau located in the heart of the business and financial district and convenient to the government departments. Our patrons who may wish to be privately informed will find our Washington Bureau prepared to serve them promptly and efficiently by mail or wire. Charges are consistent with the character of the service.

The field covered includes: Congress, the U. S. Supreme Court, Court of Commerce and other courts; the Interstate Commerce Commission and other commissions, and all Government Departments with their various bureaus and branches.

Our patrons are invited to make our bureau their headquarters while in Washington and avail themselves of our facilities.

Inquiries may be addressed to ROCK PRODUCTS, or to its Washington Bureau, Rooms 722-723 Southern Building, Washington, D. C.

Washington, D. C., Nov. 18.—Your correspondent recently visited New York for the purpose of conferring with men whose prestige and position qualify them to speak with authority on the attitude of "big business" toward the current issues. From these interviews it is deduced that "conciliation and cooperation" are to be the watchwords. Business is sincerely seeking the best methods for remedying evils the existence of which it is now ready to admit, but hopes for constructive rather than destructive legislation. To this end the larger business men are preparing to submit their views to congress confident that they will be given serious consideration in the framing of remedial legislation.

G. A. Lutz, president of the Etowah Dredging Company, of Georgia, called at the Rock Products Bureau recently with some samples of sand, gravel, gold and other products dredged from the Etowah river about forty-five miles from Atlanta. Few people not directly interested in mining are aware of the fact that Georgia is quite a gold producing state.

The Etowah Dredging Company went into the business of dredging the bed of the Etowah river for the purpose of obtaining the gold washed down from the mountains, but it has been discovered that what might be called by-products are really of more value than the gold, although the latter alone admits of working at a profit. The white sand obtained is of a very high quality and in demand for cutting and polishing the celebrated Georgia marble, much of which is produced not far from this region. The gravel is said to be of a high quality and is expected to find a ready sale in Atlanta for concrete and building purposes. It is also claimed that the pebbles can be ground and used to make cement of a very satisfactory character for building construction.

Perhaps the most important of the products, however, is what is known as the black sand, which was some years ago the subject of a considerable research by the United States Geological Survey. This sand is much heavier than the white sand and is separated therefrom by processes of sifting and is especially rich in ilmenite which is the basis for titanium, which is extensively used in making the steel rails and which is said to produce the hardest steel rails known. The black sand also contains monozite, which is used for Welsbach mantles. In addition to all these products of the bed of the Etowah, a number of choice garnets have been found suitable for making emery wheels, and several topaz. Mr. Lutz was in Washington for the purpose of raising additional capital to further develop this enterprise. He is well known as the inventor of the machine so extensively used for resurfacing asphalt streets, which has been so successfully employed in Washington. He resigned the presidency of that company to take over the work of the Etowah river.

The following inventions were patented in Octo-

ber: Concrete post, C. F. Busse; reinforced concrete lining for mine shafts, C. Scholz; concrete priming and coating composition, C. Ellis; concrete wall construction, F. J. Hardecker; form for molding reinforced concrete conduits, by G. M. Graham; concrete flooring construction, by J. G. Zwicker; concrete flooring member mold, by J. C. Zwicker; fitting for reinforced concrete structures, by G. M. Graham; reinforcing frame for concrete structures, by G. M. Graham; constructing concrete walls, subways, etc., in the earth, by G. W. Jackson; burning brick, by J. H. Bach; concrete construction, by J. E. Zonzelman; concrete construction, A. J. Meier; making concrete work permanently water tight, by H. J. Livingston.

The Secretary of the Interior has authorized the Reclamation Service to place cement linings in a number of the main distributaries, Umatilla irrigation project, Oregon. Plans for this work include the lining of more than 30,000 linear feet of canals and the construction of about 10,000 linear feet of cement pipe, at a total cost of approximately \$50,000.

The 42nd annual meeting of the National Board of Trade will be held at the New Willard Hotel, in Washington, commencing Tuesday, January 16, at noon, and continuing through to the 18th. Secretary A. T. Anderson of the organization has sent out notices from here of the meeting to the members of the National Board of Trade and other commercial organizations throughout the country. All subjects to be considered or acted upon by the association will be national in character. Among the questions of importance to the business interests of the country that will be considered are the following:

The corporation problem. An improved banking and currency system. A non-partisan tariff commission. Shall the Panama Canal be free to coastwise shipping? Wednesday, January 17, will be known as "corporation day" at the convention, and it will be devoted to the consideration of our corporation problem, at which time the question will be discussed by eminent men of affairs.

The officers of the National Board of Trade, which was organized in 1868, are as follows: President, Frank D. Lalanne, of Philadelphia; vice-presidents, Clinton White, of Boston, and Wm. H. Douglas, of New York; treasurer, Wm. R. Tucker, of Philadelphia; secretary, A. T. Anderson, of Washington, D. C. Board of managers: Albert J. Logan, of Pittsburgh; Albert M. Read, of Washington, D. C.; Albert McCullough, of Cincinnati; George F. Stone, of Chicago; Wm. D. Mullen, of Wilmington, and J. J. Sullivan, of Cleveland.

Agents of the Interstate Commerce Commission have been looking into certain rates to determine the relative merits of the application of published schedules. Important among the developments are the rates on sugar, coal, cement, machinery, etc. The comparison is made on the value of the traffic handled and the consequent liability and hence the value of the service performed. In the investigation it has been found that sugar valued at \$150 per ton is shipped at one and ninety-three hundredths mills per ton mile. Coal, which has a valuation of a little more than \$1 per ton at the mine, is shipped at three and thirty-nine hundredths mills per ton, and cement, having a valuation of \$30 per ton, is shipped at six and six-tenths mills per ton mile, while machinery whose ton valuation is very difficult to estimate, takes a rating of seven and one-half mills. Produce, with, of course, a variable value, is charged thirteen mills.

It seems from the reports that sugar is a preferred commodity and yet element of cost to the company is not shown on the tabulation. As an instance, 18 tons of sugar is considered a carload because of its bulk, while coal loads from 40 to 50 tons, produce heavy and machinery often to the coal tonnage. Based on the theory that the company hauling charges more where the risk is greater, there is an apparent neglect to recognize this rule, because sugar, a valuable commodity, is carrying by comparison a very low rate. Car capacity seems also to have been disregarded in the report disclosures.

FOR THE RETAILER NEW YORK

**Every Retailer of Builders' Supplies Should
Make His Plans Now to Attend the
Convention in January.**

We believe it would be a good idea if every retailer of builders' supplies in this country could be made to understand the value of organization. There is none of them but who know that in union there is strength and yet but a mere handful of all the retailers in the United States attend the national meetings. In a recent letter from President Warner, he attributes the failure of the National association to accomplish more to general apathy among the retailers of builders' supplies. This is really the keynote of the situation, but what can be done to arouse greater interest and more enthusiasm is a question.

ROCK PRODUCTS has been endeavoring to arouse more interest in the meetings by suggesting to the retailers at large that they each and every one take it upon themselves to write down before they come to the meeting what they think the association ought to do. The great trouble in the past has been that the retailers come to the meetings unprepared. They allow a few of the more prominent members to do all the talking and then go home and criticize the association by saying that they never do anything. A man does not have to be a brilliant speaker to present an idea. In fact, if you will but write ROCK PRODUCTS a letter, we will publish it in our December issue and in this way will bring the matter to the attention of the members before the annual meeting with the idea of getting them more or less familiar with its contents so that they will be able to give it more intelligent consideration. The question and answer box has developed in the past some good ideas, but in the excitement of the meeting a great many of the retailers forget some of the matters which have been uppermost in their minds throughout the year and after the meeting is all over they remember with regret that what they came to the meeting for has not been accomplished.

Every organization has more or less the same trouble. The rank and file of the membership always sit back and let a few do the work and after it is all over criticize their actions. Few of the retailers realize what vast benefits have accrued to them through the National Association, but what has been accomplished in the past is but a drop in the bucket to what can be accomplished if all the retailers in the United States will but unite firmly.

We have frequently heard retailers say what they think the association should do and can do. When the meeting time arrives they never utter a word. They pay their dues and go back home and think for another year, and that is about all there is to it. The same men, almost without exception, have done the work from the time the association was started. That they have accomplished as much as they have is greatly to their credit and we do not want to take any of the glory away from them, but the rank and file have shown so much apathy that it is about time that something was done to stir them up.

Now, the coming meeting at New York will no doubt bring out the largest gathering of retailers of builders' supplies that has ever come together. There are many reasons for believing this.

First of all is the fact that the meeting is held in New York city. Every live business man wants to visit the metropolis of his country at least once a year and he can combine business with pleasure by going to this meeting.

Secondly, the Cement Show will be held at the same time at Madison Square Garden. This is a great educational feature and one which should prove alike interesting and instructive to every retailer of builders' supplies. The show is as much intended for him as it is for the concrete operator. Every retailer should not only know how to sell his goods, but how to use them in order to better and more intelligently explain them to his customer. The best salesman is the one who thoroughly understands what he is selling and the

practical demonstrations which are made at these shows offer a splendid opportunity for the retailer to post himself upon the various uses of the building materials which he handles every day.

Thirdly, there will be a meeting of the sand and gravel operators of the United States at the same time and place of the meeting of the National Builders' Supply Association. As many of the retailers of builders' supplies are also producers and dealers in sand and gravel, they should be interested in this organization. As every branch of the business is organized with the single exception of the sand and gravel business, there can be no doubt but that this meeting will attract the producers of sand and gravel from all over the eastern section of the United States.

Every wideawake dealer in this country should plan to spend at least a week in New York city. He will have plenty to interest him throughout all this time. It has been several years since the association held a convention in the East. The Hotel Astor, 44th and Broadway, has been selected as the headquarters and the meetings will be held in the large meeting room of the hotel. The convention will occupy two days, Tuesday, January 30, and Wednesday the 31st. Make your plans now so that you will not let anything interfere with your going.

The Central Contracting Company, of Hoboken, N. J., has been incorporated to do a general contracting and construction business, with a capital stock of \$50,000. The incorporators are: C. J. Tahen, J. Cunningham and G. A. Enright, all of Hoboken, N. J.



**This is Jonnie and his pets.
His pets love Jonnie.
Soon Jonnie will feed his pets.**

The retail yard of George Cook & Son, at Hope, Ind., was destroyed by fire November 2, with a loss of \$12,000 and about \$5,000 insurance.

Builders of Milwaukee, Wis., have opened a permanent exhibit room at the Builders' club, 456 Broadway, which will remain open the entire year.

The O. H. Paddock Lumber Company, of Pana, Ill., which already has ten yards in central Illinois, is said to be seeking a location for another in Gillespie.

H. S. Butler, of Hillsboro, Ill., will open a retail building supply yard in that city about January 1. In connection with this yard he will operate a cement block factory. Mr. Butler is a well known builder and contractor, who erects houses all over central Illinois.

Andrew Crandall, of Alton, has sold his lumber yards in Bunker Hill, Ill., to Theodore H. Prehn, who already is in the retail business at Bunker Hill. Mr. Prehn will occupy the yards formerly used by Mr. Crandall. Mr. Crandall will devote his time to his yards at East Alton and Wood River.

The Terry Lumber Company and the Simpson-McClure Lumber Company, of Galesburg, Ill., are said to have sold the sites occupied by their yards to the Chicago, Burlington & Quincy Railroad, and will secure new locations in that city. The deal was made to allow the railroad company to improve its transportation facilities in Galesburg.

INTERESTING SUIT SETTLED.

New York, N. Y., Nov. 17.—A decision of value as defining the rights under independent contracts between the same parties was rendered by the New York State Court of Appeals in the October term, reversing the judgment of the Appellate Division of the First Department, which had affirmed a judgment entered upon the verdict of a jury at a trial term of the Supreme Court.

The action was brought by the Atlantic Building Supply Company against the Vulcanite Portland Cement Company and concerned two contracts between the companies. The first was for the purchase of 5,000 barrels of cement to be delivered from time to time to the plaintiff by the defendant. The second contract carried an agreement whereby the plaintiff was to receive and store all the cement that the defendant might ship to Jersey City, N. J., and deliver it from time to time to the various parties the defendant might direct at specified rates. The parties entered upon the discharge of the last contract and during its prosecution the plaintiff, against the direction and command of the defendant, took from time to time such quantities of the cement as it wished, claiming the right to do so under the executory contract of purchase. The defendant company thereupon refused to further employ the plaintiff in the storage or transportation of its cement and for that alleged breach of the contract the action was brought.

The Court of Appeals in its decision held that the contracts for the purchase and for the storage and transportation of the cement were entirely independent and that the rights and obligations of the parties under each contract were no greater nor different from what they would have been under a single contract. The cement which was the subject of the contract of purchase could not come under the title of the plaintiff until it had been delivered or had been designated and identified. The contract for storing and transporting the cement, the court ruled, vested the plaintiff with the mere rights as bailee of the defendant, whose directions for the delivery of the cement the plaintiff was bound to follow.

Chief Justice Cullen, who wrote the opinion of the Court of Appeals, distinguished between the rights and obligations of the two contracts as follows: "The fact that the plaintiff had also the contract for purchase gave it no more right, against the defendant's direction, to appropriate under that contract of purchase the cement in its possession as bailee than it would have had to take the property from any other bailee of the defendant. Nor had the plaintiff as bailee any greater right to appropriate the property than it would have had to deliver it over to some other party who had or claimed to have a contract with the defendant for the purchase of cement. It is true that the defendant was under an obligation to sell the plaintiff cement. For a failure to comply with that obligation it was doubtless liable for damages. This failure may not have been the result of any moral fault, but of accident or misfortune. However that may be, the cement was the defendant's property and it had the right to deliver it to whom it saw fit, remaining liable to the plaintiff for damages for the breach of its contract to sell, and the plaintiff, as bailee under the trucking contract, had no greater right to dispose of it contrary to the defendant's instructions, than a shipping clerk in the latter's employ would have had. The defendant's cancellation of the contract was therefore justified as a matter of law and the complaint should have been dismissed."

E. J. Tully, manager of the Mortar Material & Sewer Pipe Co., of Cincinnati, Ohio, in a recent letter said: The writer has been some 25 years in the business and has now started on his own hook; your paper seems the best in our line, so here's to help it along. Enclosed find check for \$1.00 in payment for our subscription.

The building material interest of the Hurley estate at Saybrook, Ill., has been taken over by Leo and Earle Easterbrook and will continue under the firm of C. P. Easterbrook & Sons. These young men have been closely connected with the lumber business in that city for several years past, having been in the employ of Mr. Hurley, the former owner.

The American Safety Device Company, of Manhattan has been incorporated to manufacture appliances used in building and construction work, with a capital stock of \$200,000. The incorporators are: C. S. Hunter, New York City; U. A. De Novellis, Flushing, L. I., and J. L. Clucas, of New York City.

The Phillips Construction Company, Camden, N. J., was chartered under New Jersey state laws October 18; capital, \$25,000.

MONEY IN PAINT AND VARNISH

Every Retailer of Builders' Supply Should Carry a Complete Line as They Are an Essential Part of the Building.

Paint is a building material. It is just as essential a part of the stock of a well regulated builders' supply depot as is any other kind of building material. There are many retailers now who handle these materials with satisfaction and profit and we confidently believe that if the retailers will give the matter due consideration that they will all realize the advantage of carrying a complete line.

Paints, varnishes, stains, enamels, white lead, cement coatings, waterproof paints, oils and brushes should make a profitable line for the retailers of builders' supplies, because their use is so closely allied with that of building materials, and as all architects, builders and contractors are interested in the subject, it would seem to follow as a natural course of events.

There is a good profit in handling these lines, in fact, a sufficiently large profit to justify the retailer in carrying a good stock and devoting some time and care in the matter. As a general rule, paints are handled by the general stores, department stores, furniture stores, hardware stores, drug stores, grocery stores, wall paper stores, and sometimes even the picture framing shop and the blacksmith shop.

Now it does not seem to be good policy on the part of the retailers of builders' supplies to let this business go through those channels when it is just as easy to get it himself; in fact, he is in a much better position to get it, because there is no one who has a greater right to sell paint or a more logical means of reaching the consumer than the dealer in building materials. The supply man is the first posted as to new buildings or repairs in his territory. He frequently furnishes every other bit of material which goes into a building, and there is no reason why he should not furnish the paint as well.

In discussing the matter with some retailers who have made a success of handling paint, they said it had long ago dawned upon them that there was no good and sufficient reason why a man who was going to build a house should buy all his lumber and other materials from him and then go right over to another store to get his paints, varnishes and finishes. We have written to quite a number of paint manufacturers in this country in an endeavor to get their view of the matter, and we are going to present a few of the letters which we have received on the subject. These letters go to show that there is a great profit to be made in handling paints, providing the dealer handles it intelligently. However, there is much less trouble in handling paints than there is in handling a great many of the other materials which the dealer now carries, frequently without knowing the merits of the goods.

If the trade justifies it (and it should justify it if the proper effort is made), the dealer can give enough time to the study of the subject to understand just what kind of paints are required, and can display his stock attractively since the manufacturers of paints are always ready and willing to cooperate in this direction and furnish the retailer with such display matter and advertising literature as will enable him to push the line without great expense to himself.

There are of course various and specific talking points and arguments for each article. The good paint salesman realizes that on his powers of presenting the right arguments to different customers depends the making of the sales. As practically all paints, varnishes and stains come in cans, there is no deterioration, no dirt, and on the whole very little trouble in handling the line.

If your trade is large enough to warrant it, it would be a good idea to have one man devote his entire time to the paint department, as its possibilities are only limited by the amount of energy and determination you put forth. Bear in mind that the people—the masses, if you please—are buying paint and more paint, and will continue to buy it, if not at your store, some other store.

Of course, the greatest profit lies in handling the big contracts and the retailer of builders' supplies being in such close contact with these local architects, builders, etc., is in much better position to talk to the prospective paint buyer than is the druggist, hardware dealer, wall paper man, grocery man or any other kind of a merchant.

If the retailer of builders' supplies will write to us, we will send him enough literature on the sub-

ject to give him a good idea of what he can do and will not charge him anything for the service.

It is the province of Rock Products to try to make more money for the retailer, and we think this is a good method and a good opportunity, especially in the cities where there are no regular paint stores, but even then the retailer could easily handle a large portion of this trade without any additional help, and find that at the end of the year he will have added a considerable amount more to the profit side of his ledger.

We would like to hear from retailers who are already handling paints as a side line, as to what success they have had with the matter, and they can perhaps advance some ideas which would be of great interest to the retailers throughout the country who are seriously considering the subject today.

The following are some of the letters we have received and indicate that the paint manufacturers are ready and willing to cooperate with the retailer if he will show an inclination to take up the matter.

J. W. Bray, treasurer of the Campbell Glass & Paint Co., of St. Louis, Mo., has this to say:

Paint as a side line is always a profitable one, provided the dealer handles it intelligently. The building supply people frequently handle it without knowing the merits of the goods, what they are peculiarly adapted for, and in the average retail store no one man knows anything about the talking points of paints. The dealer who puts in a line, displays the stock attractively, learns something about the goods he is handling, and makes some one man responsible for the paint department, generally makes a success of it.

The Glidden Varnish Co., of Cleveland, Ohio, in answer to our inquiry on the subject, had the following to say:

It is our opinion that, in view of the fact that these materials can be bought and sold at a very good profit and that prices are not cut among retailers to the extent that they are in other lines, we believe that there is no doubt that paint and varnish are profitable materials for dealers in builders' supplies to handle, particularly as their use is closely allied with that of building materials, and as all architects and builders are interested in the various wood finishes, such as paints, stains, varnishes, enamels, etc.

James H. Rice & Co., of Chicago, Ill., gives facts regarding the profits to be made in handling paints:

We are frank to say that we believe this line would be very profitable. All retailers of paints, varnishes, brushes, etc., make an average profit of 35 per cent. In many instances 50 per cent profit is made. We are speaking now of the retail trade. Paints, varnishes, etc., when handled in a jobbing way net a considerable less profit, but the volume of business done by the jobber makes up for the difference in profit between the retailer and the jobbers' prices. We would be glad to send anyone who makes inquiries a line of advertising matter, catalogues, etc., and also our very best information.

Wadsworth-Howland Co., of Chicago, Ill., say:

We know of no more profitable line than the average retailer of builders' supplies can handle than paint and paint specialties, as the average mixed paint would net a profit of at least 25 per cent and paint specialties will run from 25 to 50 per cent.

The Waggener Paint & Glass Co., of Kansas City, Mo., give some very good arguments why the retailer of builders' supplies should handle paints. They write as follows:

There is no question about the profit side of the retail paint business. Paint users are growing more numerous each year, and will no doubt continue to do so for many years to come.

We number among our customers many classes of dealers: the general store, the department store, the furniture store, the hardware store, the drug store, the lumber yard, the wall paper store, the picture framing shop and oftentimes the blacksmith.

If there is anything in a logical connection between the dealer and the line he handles, we can think of none who should have greater right to sell paint or a more logical means of reaching the consumer than the dealer in building materials.

Ralph H. Jones, manager of Geo. D. Wetherill & Co., Inc., of Philadelphia, Pa., sends the following interesting letter regarding the subject. He has evidently given the matter considerable thought, and his ideas bear out what has been said before, that the retailer can easily handle paint with great profit:

Some of the best paying retail paint accounts in the country are those in the building trade line. Paint is a building material—it comes under the head, as no building is complete without it. In the past ten years the paint manufacturers have brought their lines to such a state of perfection that the dealer has but little risk to run in the carrying of stock. His line is in sealed packages, showing no waste, and he can rely on the manufacturer when he tells him that he has one hundred cents in value for every dollar invested in the paint business. The paint manufacturers as a whole are doing more work along educational lines than any of the manufacturers that the building supply men represent, and this educational work is bringing to the supply man business with but little physical or mental effort on his part. It has been demonstrated by a great number of supply men that there was no reason why a customer

should drive into the yard, purchase several thousand feet of siding and then purchase paint to cover same from another merchant. The same would apply to several thousand shingles that needed stain.

With the steady advance in the cement business the paint manufacturer has kept up with the procession. Cement coatings not only preserve the surface of buildings of cement, stucco, peddle dash and cement block, but beautify them, and have entirely done away with that great drawback—the changing in color. These paints or coatings are also damp proofers. No building supply man who carries cement has a complete stock without one of them.

In this day of sanitation the death knell of wall paper has been sounded, and when the supply man furnishes the plaster for a building he likewise furnishes the wall coating, or as it is now known to the trade, the flat wall finish. These goods are made up in all of the attractive wall paper shades and when used either on sand or a smooth finish, give that much desired soft velvety effect.

All that is said in regard to the paint can be well said in regard to the varnish, in fact with but little effort, either mental or physical, the supply man can use the paint business for a source of great profit. The manufacturers are doing great work for their dealers through country advertising. They are circularizing each paint prospect with educational literature, and in this line they can do more for the supply man than for any other dealer, as, in always the case, the supply man is the first posted as to new buildings, or repairs, in his territory.

Considering the investment no line handled in the yard gives the returns in profit than does the paint business.

The Wooster Brush Co., of Wooster, Ohio, give some very good reasons why brushes should be carried by the retailers:

From the number of drug, hardware and builders' supply houses carrying this material it certainly must warrant a very attractive profit. Paints, varnishes and brushes certainly belong to the builders' supply trade, and we do know that there is more profit for the dealer in selling one good brush which costs him \$1.00 or \$1.25 each, than there is in selling 100 pounds of white lead which represents an initial investment of \$6.00 or \$7.00. The dealer can make more profit on one brush than he can in selling \$6.00 or \$7.00 worth of lead or oil, not considering the small amount of room taken up by a brush stock and the convenience in handling same with his other material.

The Lowe Bros. Co., of Dayton, Ohio, seem to think that the handling of paints is of such importance that it should not be considered as a side line, but that there is sufficient profit in it to justify the retailer in making a regular department of it. We quote from a letter received from Edwin L. Shuey, director of the advertising department, which covers the subject:

There is no doubt that paint and varnish are profitable lines to carry and that when properly managed will bring as large a return to the merchant as any other line of goods.

If he carries paint as a "side-line" he can hardly expect to make much on it, but if he will make it a department and give it real attention, he can make money. It is just as essential to the stock of a dealer in building material as any other article used in building. The merchant will succeed in proportion as he gives it attention.

Charles Barr Field, editor of "Profitable Paint," has the following interesting comments to make on the subject:

Having been in the paint business a great many years, the writer naturally feels that if there is room for anything in this field, there is room for paint. Paint is an essential part of the painters' and builders' stock, and there is as much profit in selling paint as in selling cement. Paint the way it is used nowadays is a clean, interesting and profitable business, and one that should not be overlooked by any dealer in building supplies. Competition in the paint line is extremely keen and the various manufacturers vie with each other in sending out attractive advertising matter for both the inside and outside of the store.

H. M. Hooker Company, of Chicago, Ill., seem to think that a builders' supply retailer is in a better position to handle a paint line than almost any other kind of a retailer. We quote from his letter as follows:

From our experience with the building trades, there is no one in better position to furnish paint, varnish and other materials in the paint line than those who furnish the cement, brick, lumber and other goods, which are used long before the painter is wanted on the job. Having this advance information, it serves as a special lever to go after the paint and varnish to be used on the job. This would be our strong talking point in this line and trust this little information will be of some advantage to you.

The Muralo Company, of Chicago, Ill., manufacturers of wall coatings, state:

Our business is the manufacture of cold water paints and kalsomine and flat wall paints. All of our products are a profitable proposition for anybody handling a line of paints, the profits on these goods running all the way from 25 to 100 per cent, and there is a steadily increasing demand for these products.

Samuel Cabot, Inc., of Boston, Mass., says:

We do not manufacture paint, and therefore cannot speak with authority upon this subject, but a great many of our agents are dealers in builders' supplies, and handle our shingle stains, waterproof cement stains and waterproof brick stains, finding it profitable. This is a little different from the paint line, because all of our goods are architectural specialties.

Wilkes Martin Wilkes Co., of New York City, N. Y., writes as follows:

We are the largest manufacturers and shippers of fine blacks in the world. As you know, in this line are included the mortar blacks for concrete and sidewalk work, and we are supplying the majority of the large, and also the smaller and reliable concerns throughout the country in your line—who desire to do strictly first-

class work—on account of the extreme purity and reliability of our products, the Bear blacks.

The National Lead Co., of New York City, N. Y., also seem to think that the retailers of builders' supplies could handle their products with great profit and satisfaction to themselves. They issue booklets to the trade, one entitled "Satisfactory painting," and another, "How to make money on white lead," both of which contain a great deal of data on the subject which should be interesting to the retailer of builders' supplies.

The Martin-Senour Co., of Chicago, Ill., seem to think that the idea of classing paints and varnishes as a side-line is all wrong, as in their opinion these materials are a very necessary part of the builders' supply business, and no builders' supply firm can be considered to have a complete stock unless he has a good line of paints and varnishes in his stock. We quote the following from their very interesting letter:

It somehow rises our otherwise even disposition when we hear paints and varnishes classed as a side line for the builders' supply store. We contend that exterior paint, shingle stain, interior paint, exterior and interior concrete coating, etc., are just as necessary to a building as stucco, plaster, tile, roofing and building paper, ornamental steel and other similar materials. It seems to us to be a very arbitrary ruling to class paint and its accessories as a side line, especially when we consider the broad classification made in other lines of trade.

Regarding the value of paint and varnish to the builders' supply store, we will say that it all depends upon the quality of the goods the proprietor handles. A good line of paints will always be very profitable if given the proper position in the store and well displayed in the window. Besides being a compact stock, convenient and clean to handle, it is the biggest agency for new business that may be employed by the dealer. Every building that is painted with the brand of paint he sells "if the quality is good" stands as a daily reminder to all property owners that his store is the place to buy first class material. The builders' supply dealer is at all times in direct touch with the new buildings being erected, and in better position to follow up these prospective customers than the hardware dealer who considers paint and varnish a necessary part of his stock. His close personal contact with the contractor or owner gives him an opportunity to find out just what paint, stains and varnishes are needed, so that he can talk more intelligently in promoting their sale. The fact that his first sale of paint to the owner of a recently completed building may be just a forerunner of many future orders to the same party, and places paint and varnish away above any other building material as a desirable product to carry in a builders' supply store.

These are only a few of the arguments which we would make in favor of carrying paint, stains and varnishes in the builders' supply store, and as for considering it as a side line, believe this is a mistaken idea and that it really should be classed as a necessary part of the stock.

S. B. Heckel, secretary of the Paint Manufacturers' Association of the United States, located at Philadelphia, Pa., says:

Briefly, I would say, that the dealer in building materials is the logical man to furnish paint. The question of profit is merely a question of selecting a good line and then paying attention to it.

There are few things in this world that sell themselves, and still fewer of which the selling cannot be increased by intelligent effort. Gas and telephone service are two examples of things that sell themselves, but the vast increase in the use of both stimulated recently by intelligent selling methods illustrates the possibilities with even such things as gas and the telephone.

To sum up, the dealer in building materials is the natural man to handle paint, whether he can make the venture successful or not depends altogether upon his own ability and intelligence.

W. H. Sipe and Mr. Smith of Pontiac, Ill., under the name of the Sipe Lumber Company, will form a merger of the Myers-Warrick lumber yards in Sheldon, Ill. Mr. Warrick has not decided plans for the future. Mr. Myers gives possession December 1. He will probably re-engage in the monument business the first of the year.

The O. H. Paddock Lumber Company of Pana, Ill., has purchased the Kimmundy lumber yards, making ten yards in the central part of Illinois. The Kimmundy yards is an excellent acquisition for the company, being centrally located, and having the advantage of the Illinois Central and Frisco railroads' shipping facilities.

Gilsdorf Bros. Co., of Chicago, has been incorporated with a capital stock of \$5,000 to do general contracting and construction business. The incorporators are Edward W. Gilsdorf, Guido R. Gilsdorf, Fred O. Gilsdorf.

The Christine Company, of Orange, N. J., has been incorporated to do a general contracting, building and real estate business with a capital stock of \$100,000. The incorporators are: C. M. Caspar, H. Diefenbacher, E. L. Davis, all of Orange, N. J.

Davis & Hopkins, Princeton, Ill., well known retailers at this point, are in the market for a mixer.

Rymer Bros. are contemplating installing a stone crushing plant at Cleveland, Tenn.

PITTSBURGH "HUMP"

To be Removed and Open the Way to Extensive Improvements That Will Involve an Expenditure of \$10,000,000 or More.

The city of Pittsburgh, Pa., in authorizing the removal of its famous "Hump" is paving the way for improvements and building construction aggregating an expenditure of more than \$10,000,000. At an estimated cost of about \$750,000 the grades of streets bordering the eastern section of the downtown business district will be reduced, the great barrier which has so long retarded the expansion of this region will vanish and phenomenal growth will follow. All branches of building trades will share the prosperity which is certain to result.

That a \$10,000,000 scheme of improvements will be consummated within a year is the prophecy of one of Pittsburgh's shrewdest engineers. It is based on an intimate knowledge of plans which have been held in abeyance for years awaiting the elimination of the formidable grade that has stood in the way of both material and financial progress.

The territory embraced in the prosaic "Hump" is historic ground.

The commanding elevation of the ground offered splendid natural advantages for an imposing build-

city's plans. Already the building boom has struck this end of town and with the removal of the "Hump" property will double in value in a short time.

Soon after the new council took office last year the "Hump" agitation was renewed. Mayor William A. Magee awoke Pittsburgh as if by a thunder bolt one morning by announcing that he had "found" enough free cash in the city treasury to enable council to proceed with the cutting down of the grades on Grant's Hill without further delay.

Delay, however, did occur. The question of the right to appropriate the free cash was raised and an audit ordered. Careful figuring showed that the amount of free cash on hand was \$505,000. New estimates allowing about \$750,000 were ordered.

Council acted promptly. Ordinances have been introduced authorizing the appropriation of the \$505,000 free cash in the treasury and also the issuing of councilmanic bonds for \$270,000.

The magnitude of the work is shown in the figures given below. The estimates which have been prepared are declared by contractors to be unusually liberal. In the grading the specifications call for the removal of 158,437 cubic yards of earth. The figures are given in detail as follows:

Grading, 158,437 cubic yards at \$2.75....	\$435,701.75
Paving, 33,862 square yards at \$3.50....	118,517.00
Curbing, 22,997 lineal feet at \$1.00....	22,997.00
Crossing, 8,339 square feet at 80 cents..	6,671.20
Sidewalks, 153,855 square feet at 25 cents	38,463.75

Total\$622,350.70



DISTRICT AFFECTED BY THE "HUMP" CUT.

Charge Pittsburgh Railways Co.

Paving, 8,378 square feet at \$3.50.....	29,323.00
Relaying water mains	\$593,027.70
Re-establishing sewer system	\$ 54,000.00
Re-establishing sewer system	111,330.00
Total	\$758,357.70

The New Brick Company, of Stillwater, N. Y., has been incorporated to manufacture building materials with a capital of \$100,000. The incorporators are: H. O. Bailey, W. H. Dufney and M. L. Welling, all of Mechanicsville, N. Y.

The Philadelphia Construction Company, of Camden, N. J., has been incorporated to carry on a general building and contracting business with a capital stock of \$100,000. The incorporators are: J. K. Dimmick, Philadelphia, Pa., and F. D. Dimmick and M. R. Gano, of Wyncote, Pa.

The New Milford Construction Company, of Hackensack, N. J., has been incorporated with a capital of \$100,000 to do a general contracting, real estate and building business. The incorporators are: P. J. Cerussi, M. Cerussi, of Long Island City, and A. Van Buskirk, of Hackensack, N. J.

The Noojin-Copeland Hardware Company, of Attalla, Ala., secured a contract recently from C. L. Peckinpaugh & Co., contractors, of Sheffield, Ala., for thirty carloads of "Royal" cement. The entire contract is to be used for street work, of which Sheffield is having a large amount done.

ing. Pittsburgh and Allegheny county rose to the occasion and Architect Henry H. Richardson was called to design the new court house. How well he carried out his commission to build the finest seat of justice in the country is well known. His work was a masterpiece and more than \$3,000,000 was expended on the structure.

The completion of the court house started anew the agitation for the cutting of the "Hump." Since that time Pittsburgh has looked forward to the improvement which likely will be begun within a few months. Property on the hill rapidly increased in value. The Carnegie building, Pittsburgh's first modern skyscraper, was built on its slopes less than 100 yards below the court house. Improvements followed apace. H. C. Frick, seeing the advantages of the locality and the trend of the city's growth, was the next invader of the "Hump." He bought the square opposite the court house and erected his nineteen-story granite office structure, one of the finest buildings of the kind in the world.

The Carnegie building and Frick's structure both were designed to meet the requirements of the proposed reduction of the "Hump."

It was only after the Carnegie building was built on the "Hump" that Pittsburghers began talking of skylines. Frick's structure was built alongside the court house tower and overshadowed Richardson's work. Other improvements followed and today the court house is hidden behind the lofty walls of stores and office buildings.

Beyond the "Hump"—to the eastward of Grant's Hill and the downtown business district—a growing section awaits the consummation of the

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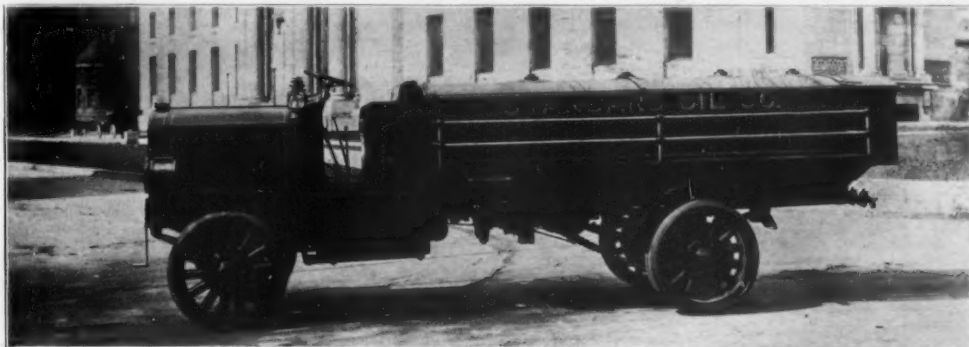
A. F. GERSTELL
EASTON, PA.

AUTO TRUCKS

**Recent Communications Elaborate Upon Their
Practicability for the Building Material
Business—Their Points of Superiority
Explained By One in the Trade.**

Wide and varied have been the responses that we have received to the article on motor trucks that was printed in the last issue of ROCK PRODUCTS. It is almost conclusively proven that the motor truck is of great value to the retailer of builders' supplies. The dealers who are using trucks in place of horses and wagons are unanimous in declaring that they create a great saving and that the hauling is done in much better shape than with teams. The most important drawback has been that the trucks were too expensive for short hauls and that it would not pay a man to keep a motor truck when he had only short hauls. This is true in most cases and it is evident that the only economic use for motor trucks at the present day is for long hauls. The sand and gravel dealers have found, however, that they have many short hauls up very steep grades and that the automobile is less expensive where there are steep grades to be conquered.

When a dealer installs a motor truck or two in his yard and expects to create a saving in a short time without watching his expenses and his driver's time, there are liable to be many slips. The fol-



TANK MOTOR WAGON,—MADE BY LONGEST BROTHERS COMPANY, LOUISVILLE, KY.

lowing letter from the National Building Supply Company, of Baltimore, Md., will explain itself. The facts given are true and with equal care and judgment on the part of every dealer using trucks there would be equally as good results obtained. Harry P. Boyd, secretary and treasurer of the company, writes:

Replying to your inquiry of the 9th as to whether in my opinion the commercial car has passed the experimental stage, I can only reply to this in a personal way and based on my experience as applied to my particular

100 bags of cement in from $3\frac{1}{2}$ to 4 minutes; with a stationary body, each sack being handled separately, it would take about 30 minutes. In loading the truck, the body of the truck is laid out in advance there is no reason why the load could not be assembled and ready for the truck on the arrival at the warehouse. I make it a point to do this, and to put my entire force in loading the machine when it arrives. One hundred bags of cement are handled in this way in about 10 minutes. I, therefore, calculate that in unloading and loading the trucks I save about 45 minutes on each load. I have also figured that it costs close to \$1.50 per hour to run the trucks. This is equal to $2\frac{1}{2}$ ¢ per minute, which is a distinct saving of $1\frac{1}{2}$ ¢ per load in loading and unloading over the usual method.

Now, as to the long hauls, I endeavor to reserve all loads of two miles or over for the trucks; short hauls I reserve for horse and wagon deliveries. Each driver of the trucks is supplied with a sheet like the one enclosed, and is required to fill in the blank spaces, so that every morning I know the exact mileage, tonnage, time lost in loading and unloading, and time of the trip with other blanks filled in as mentioned on the sheet. This puts me in a position to keep a most accurate account of the work of each truck and to investigate in the event of any apparent loss of time. This creates also, a certain amount of rivalry among the drivers, and has keyed them all up to get the best out of their respective machines they can. There is another very important element to be considered and that is that any man owning a truck must be able to keep work to keep it going all the time. It might also be of interest to you to know how accurate the actual cost on same. This I do monthly, compiling the statement from the daily reports of each truck. The following is a late report on the "Packard," which will act as an example.

Average miles per day, $42\frac{1}{2}$. Total of 27 working days, 1,140 miles.

Cost of gasoline, oil, and incidental repairs, also wages of chauffeur and helper, \$157.64, averaging \$5.84 per day; wear on tires, 6c per mile, averaging \$2.53 per day; depreciation on valuation at \$4,000 at 20 per cent, averaging \$2.50 per day; insurance, liabilities, fire, etc., 75c per day; average expense for operating truck for 27 working



WHITE MOTOR TRUCK OF NATIONAL BUILDING
SUPPLY COMPANY.



SAME TRUCK IN ACT OF DUMPING.

of departure, time of arrival, number of miles traveled, etc., is another part of their system that has decreased the operating costs in a large manner. Each driver is furnished with one of these sheets each morning and at the end of the day he turns it in to the office with all the items filled in and in that manner an accurate account is kept of every driver's time and his relative operating cost with the other drivers.

We print below a story from Will H. Brown, president of the Mais Motor Truck Company, of Indianapolis, Ind., which contains some valuable suggestions on the use of motor trucks and their practicability:

Not long ago labor was not considered a commodity. Today it is and so is transportation. When a progressive business man buys a motor truck he gets more than a body, motor and wheels; he gets mileage. He also gets a new system of doing things.

A truck is more than a mere substitute for horses. It is this and more because it is an even greater step in the revolution of the science of locomotion than is the pleasure automobile.

The whole truck question is one of service—for it is no longer a question between horses or trucks, but discrimination between different trucks. When a man sends a telegram or talks vital business over a long distance telephone, what is it that actually happens? Why, he overcomes time and distance. His agent in a distant city is no farther from him than is his telephone on his

TIME TO LOAD	LEFT	TIME	ARRIVED	TIME	TIME OF TRIP	MILES	TIME TO UNLOAD	LEFT FOR	TIME	ARRIVED	TIME OF TRIP	MILES	WEIGHT OF LOAD
TOTALS		ELAPSED TIME				TIME STOPPED		TIME RUNNING					

RESULTS

Weather Conditions

Road Conditions _____

This Record Is Correct_____

Total Time Elapsed _____

Time Stopped _____

Net Running Time_____

Total No. of Miles _____

No. of Stops _____

Gasoline Used, Gals. _____

Lubricating Oil Used, Pts. _____

Cost of Supplies.....

Miles Per Gal. Gasoline_____

Driver _____

line of business. I run three commercial trucks; two of them being the "White" 3-5 tons; one being a "Packard" 3-ton truck, but which is guaranteed for 4 tons. In my mind, there are two very important matters to be considered in order to make the commercial truck a paying proposition: one is "long hauls," the other "quick loading and unloading." Short hauls and long stops are expensive. I have had dump bodies attached to my trucks, and as an example of the advantage of these, would say that I can unload by the dump device

it can readily be seen that the expense of unloading the trucks after a haul would be almost enough to make the auto truck too expensive. With their unloading device they have eliminated the loss at the end of the haul and have decreased their operating expenses accordingly. The time sheet on which is kept a record of all the hauls and the stops, time

desk. And, while he is talking, he does not worry himself about the great complex mechanism and inventions that makes this service possible. The service is there because the mechanisms are perfect.

Likewise with a motor truck. It gives the business man a bigger radius—makes him neighbors with customers that were formerly isolated—it decreases the miles and enlarges the hours. When this truck is in service his mind should not be worried any more with its working than he was when talking over the telephone—his one



NEW OFFICE OF EMPIRE WALL PLASTER COMPANY, BUILT OF CEMENT BLOCKS MANUFACTURED BY THE FIRM. FRONT VIEW OF MILL OF EMPIRE WALL PLASTER COMPANY, UTICA, N. Y.

thought being that of the mileage he is getting from his truck. And, by the way, if So and So gets more mileage out of his truck than his neighbors, So and So's truck is costing less, no matter what the initial expense.

The problem therefore of the truck builder is to provide a machine that gives the most mileage—that works year in and out at no more maintenance cost than for the first year and whose mechanical parts do not need "nursing," but furnish a real delight because of their perfect and effective operations should the owner take a fancy to inspect them.

But talking about trucks in general as superior to horses, remember that money is the sand in the hour glass and in the same breath, that whatever increases trade cuts cost and produces profits. Horses eat at least fifty-two days in a year when they do not work, while the truck eats only "when on the job."

Horses are not intended for cobblestones, slippery streets and steep hills with burdensome loads. The truck conquers hills, mud, sand or any kind of streets. Wintry storms retard horses and cause them to suffer, while the broiling sun of summer kills them. The truck travels through all kinds of weather with equal efficiency and no lost time. Horses go slower with their load than does the truck, while the truck returns empty in a quicker time, saving time and money both ways and making the men employees more valuable. The horse has a time limit—must rest. The truck works night and day and is just as fresh at all hours. Trucks give better service and better reputation, as the advertising value is a by-product. They also save in real estate rentals and require less than half as much room as horses for storage and traffic.

Mr. Brown is probably one of the best informed men in the motor truck business at the present time, and his views as given in the above story are not in any way connected with his views as relative to the value of his company's motor trucks and others. He gives facts that everyone in the business or everyone who at any time has any idea of purchasing a motor truck should know. Descriptive matter on the Mais motor trucks can be had from the company at Indianapolis.

Charles M. Kelley, president of the James C. Cog Company, builders' supply dealers, Providence, R. I., has the following to say regarding the motor truck: "We have used a 3-ton Packard truck since September 8, this year, hardly long enough to form a really definite idea of their value as compared with horse-drawn vehicles. At this time, however, we think that it is not economic in hauls of less than two miles, but the trucks are great things in long hauls. We carried yesterday 68,000 pounds to a point twelve miles distant, and about the same load ten and five miles. When we have used the trucks for a time we will be in a position to say definitely whether they are less expensive than horses and wagons."

As the manufacture of motor trucks advances, the more practical men in the business try to anticipate the requirements of the trade by testing the machines long before placing them on the market. New types of trucks to meet the economies of specific lines of trade are always being built, and one has recently been finished for the Standard Oil Company, by Longest Bros., of Louisville, Ky., that covers every improvement so far in the handling of

oils for city delivery. It has been thus shown that ingenuity can devise a safe and satisfactory car to operate with a motor power. Before this car was designed, Longest Bros. Company had experimented with cars in the interest of the coal trade and had evolved the side dumping compartment car with several bins. The car is built so that all the bins can be unloaded at once or one at a time. This permits the driver of the car to make many more deliveries without going back to the yard, and the unloading is much more easy and quick and in every way is an improvement over the old style.

E. A. Fowler, statistician of the Commonwealth Edison Company, Chicago, writes as follows: "We have some eighteen electric trucks of modern type in use and we have been keeping careful statistics on the cost of operation, mileage, etc., since we



OFFICE AND YARD AMERICAN HARD WALL PLASTER COMPANY.

began the use of these improved wagons. Our record to date shows that the cost per mile is 23.6 cents. Practically all of our eighteen trucks are of the 1½-ton variety and are not used in service exactly comparable with the teaming of building material. For this kind of service I imagine that the mileage would be reduced somewhat, but even then there should be considerable margin in favor of the electric trucks."

From these letters it will be seen that there are many reasons why the dealer in building materials should make it a point to at least investigate the matter and see if there is not something to his advantage to be incurred in the use of the motor truck for delivering materials. Some dealers will say that they have no long hauls and so would not be benefited by using a motor truck. It is evident that with the motor truck they could increase the distance to which they are now able to haul and in that way could increase their business to a great

extent. ROCK PRODUCTS is going to do all possible to bring this question before the supply man because ROCK PRODUCTS believes that it would benefit the supply man to have a motor truck in his business. We will be glad to hear from any one interested in the question and would also be glad to furnish any desired information on the subject.

UTICA RETAILERS.

Utica, N. Y., Nov. 16.—Twenty-five years ago W. H. McCann founded the business out of which grew the present Empire Wall Plaster Company, which was incorporated four years ago. The officers are John Davies, president; Peter W. Dutton, vice-president, and F. F. Dutton, secretary and manager. The yard in which the mill is located covers three acres of ground. It is located at 269 to 285 Kossuth avenue and the West Shore railroad. A switch track from the West Shore railroad, accommodating seven freight cars, runs along one side of the yard, close to the mill and warehouse. Its storage capacity is approximately 3,000 barrels of cement. The mill has a capacity of turning out 40 tons of plaster per day and is equipped with the latest type of machinery; it has installed a steam dryer, made by the Morrison & Voght Company, Scranton, Pa.; two Broughton mixers, made by the A. D. Dunning Company, Syracuse, N. Y., and all machinery is run by electric power with individual motors. The company manufactures concrete blocks, using the Hobbs block machine, the output of this product averaging 200 blocks a day. The mixer used for the manufacture of these blocks is the "Bly stone," installed by the Century Cement Machine Company, of Rochester, N. Y. Its new two-story office building just finished, an exceedingly handsome structure in appearance, was built of these blocks. The company is the local agent for the Lawrence, the Universal, the Penn-Allen, the Copley and the Cayuga Portland Cement companies; it handles its own plaster, the "Empire," and fin-

ishes; is agent for the famous "Adams" line of the New England Line Company, Danbury, Conn.; hydrated lime of the Kelley Island Lime & Transport Company; Sackett's Plaster Board of the United States Gypsum Company; sewer pipe flue lining, wall coping, etc., of the United Clay Manufacturing Company, New York City; common and pressed brick of the New York State Pressed Brick Company, Rochester; mortar colors of the Clinton Metallic Paint Company, Clinton, N. Y.; metal lath, waterproofing mineral paint of the Trussed Concrete Steel Company, Detroit, Mich. The Empire Wall Plaster Company owns and operates a sand bed of 100 acres at White Lake, N. Y., which is shipped by rail thirty-seven miles. It owns two teams, one single and a four-ton auto truck, which does the work of four teams. Secretary Dutton reported business fine this year. Miss F. E. Thayer, who is the auditor of the company, is an expert photographer, and to whom the readers are indebted for the accompanying illustration of the company's office building and mill. The company furnished 700 tons of its "Empire" plaster which was used in the interior of the new Hotel Utica, one of the finest hotel structures in Central New York.

McQuade & Bannigan do a large business in coal and mason's supplies in Utica. They are also members of the firm of Wheeler, McQuade & Company, which was established in 1906. They operate two yards, one at 11 Hickory street, and the other at 231 Nichols street. The Hickory street yard is located on the New York, Ontario & Western and the Delaware, Lackawanna & Western Railroads, with four separate switch tracks from these roads running into the yard, accommodating 30 freight cars. They have a storage capacity of 1,500 barrels of cement, and as much storage room for fire brick, fire clay, etc. They will increase this storage capacity greatly on account of rapidly increasing business. They have room for storing 3,000 tons of



WAREHOUSE OF AMERICAN HARD WALL PLASTER COMPANY.

coal. They own twelve horse teams and one large auto-truck. They handle cements of the Atlas, Lehigh, Vulcanite, Dexter, Lawrence Iron Clad and Glens Falls Portland Cement companies and are local agents for all except the Atlas; they handle plaster of the Niagara Gypsum Company; lime of the Waite Lime Company, Glens Falls, N. Y.; sewer pipe, flue lining, etc., of the Robinson Clay Products Company, New York City; metal lath and waterproofing paints of the Trussed Concrete Steel Company, Detroit, Mich.; fire brick of the Hayes Run Fire Brick Company, Orviston, Pa., and sand. Mr. Bannigan reported business very good this year.

The American Hard Wall Plaster Company of Utica was established in 1879. It operates two



THE KELLY TRUCK OF THE EMPIRE WALL PLASTER COMPANY, UTICA, N. Y.

yards on Broad street which are on the New York Central railroad and the Erie Canal. Two switch tracks from the New York Central run the entire length in front of this property, accommodating twelve freight cars. The three-story warehouse is 115'x50', and a new warehouse just completed, 100'x60', opposite the old one, gives the company a storage capacity of over 10,000 barrels of cement. The mill located on this property has an output of 20,000 tons of plaster a year.

AMSTERDAM RETAILERS.

Amsterdam, N. Y., Nov. 16.—Two years ago the Guy Park Cement Company of Amsterdam was incorporated with the following officers: Fred J. Conrad, president; W. R. Blackmon, vice-president; C. O. Hornung, treasurer, and D. H. Ware, secretary and general manager. The office and yard are located at the corner of West Main and Evelyn streets, occupying nearly one-half of a block. It



OFFICE OF THE GUY PARK CEMENT COMPANY, AMSTERDAM, N. Y.

manufactures extensively all kinds of concrete blocks, rock face, bush hammer, plain face and panel face, and make these in common cement, granite or field spar. The equipment of its factory consists of three block machines of the Ideal Machine Company, of South Bend, Ind.; a machine which makes over 2,000 styles of block installed by the Hobbs Concrete Machinery Company, of Detroit, Mich., which is used here for making broken ashlar

blocks; two mixers, a forty and a ten-brick machine, used for making a great many cement bricks, and two Ideal machines for making window sills, window caps, door sills, door caps and dimension stone in all sizes. It also has a machine for making sidewalk blocks, 20"x20". This company is the local agent for Lehigh, Catskill, Allentown and Universal Portland cements, handles the Sandusky White Medusa cement; the Farnam Cheshire lime in barrels from the Farnam Cheshire Lime Company, Cheshire, Mass.; hydrate from the Woodville Lime & Cement Company; Best Bros. Keen cement; Sackett Plaster Board and plaster of the United States Gypsum Company, American Hard Wall Plaster Company, of Utica, and the Paragon Plaster Company, of Syracuse; Clinton Hemetite mortar colors of the Clinton Metallic Paint Co., of Clinton, N. Y.; "Hercules" waterproofing of the Hercules Waterproof Cement Company, Buffalo and LaSalle, N. Y.; the Retain Proofing, a liquid mineral waterproofing made by the National Roofing Company, of Tonawanda, N. Y.; metal lath of the Sykes Metal Lath & Roofing Company, Niles, O.; granite and marble dust and crushed granite from the Monarch Mining Company, Jersey City, N. J., and the Crown Point Spar Company, and sand and gravel. The storage capacity of its warehouses is 2,000 barrels of cement, and as much storage for plaster and other materials. The capacity of the output of its concrete blocks is three hundred per day. The new Hotel Conrad, the leading hotel of Amsterdam, opened to the public last New Year's day, was built of this company's concrete blocks, of which there are 22,000 in its walls. Secretary Nhare reports business fine and the outlook bright.

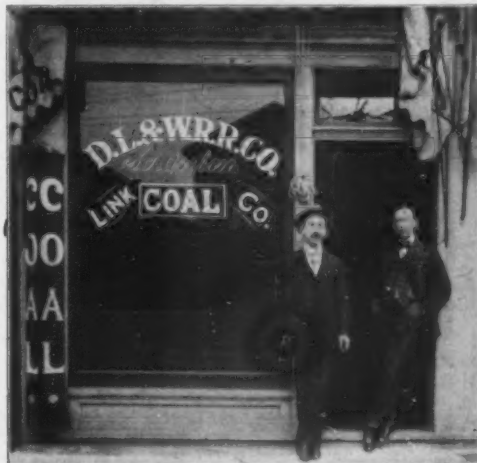
HERKIMER RETAILERS.

Herkimer, N. Y., Nov. 14.—Field Bros. bought the business and property of the Link Coal Company two years ago. Their office is located at 108 Park avenue, and their yard is on the New York Central Railroad, with switch track from it running into the yard by the coal sheds and warehouse, which has a storage capacity of 500 barrels of cement. The switch track is 200 feet long and the yard covers fully a quarter of an acre of ground. They manufacture concrete blocks for the local trade, and report that the demand for cement from farmers is increasing rapidly. They are the local agents for the Edison Portland Cement Company; handle United States Gypsum Company's plaster and Sackett Plaster Band; lime from the New England Lime Company, Danbury, Conn.; brick, elastic roof, roof paints and a general line of mason's supplies. Mr. Field reported business this year very satisfactory.

A. B. Wheeler has been prominent in Herkimer as a contractor since 1898. He takes contracts for public and private buildings, churches and residences. He built the East German street school, of concrete blocks which he manufactures, and the Greek Russian Catholic Church, which is now under construction, the foundation being of his own concrete blocks. It is said that the foundations of every house built in Herkimer are built with his concrete blocks. He uses the block machine of the P. B. Miles Manufacturing Company, of Jackson, Mich., makes a superior block which has a big sale, and turns out 200 a day. His warehouse has a storage capacity of 1,000 barrels of cement, and a switch track from the New York Central railroad runs by its door, unloading cement from the cars into the warehouse with trucks. His yard occupies more than a half acre of ground, and is splendidly arranged for handling economically and promptly all building material. He is the local agent for the Universal and Alpha Portland cements; handles the plaster of the America Hard Wall Plaster Company, of Utica, and from the same concern gets his supply of Cheshire lime. He deals in a full line of mason's supplies. "Building operations," he said, "have been more active here this year than I have ever seen them, and the outlook is certainly bright."

ONEIDA RETAILERS.

Oneida, N. Y., Nov. 19.—For sixty years and more there has been a lumber yard on the present site occupied by George A. Marcellus, at the corner of Mott and Cedar streets, in Oneida, and it is safe to say it was the first lumber yard to be established in this county. Albert Marcellus, father of the present owner, bought this lumber yard from Colonel F. C. Miller in 1878. Albert Marcellus died ten years ago. George A. Marcellus is the local agent for Lehigh Portland cement, handles plaster of the American Hard Wall Plaster Company, Utica, N. Y., and the Paragon Plaster Company, of Syracuse, N. Y.; lump lime in barrels of the New Jersey Lime & Cement Company, New



FIELD BROTHERS' COAL AND MASON SUPPLIES OFFICE, HERKIMER, N. Y.

Jersey; hydrated lime of the Woodville Lime & Cement Company and the Kelley Island Lime Transport Company; sewer pipe of the New York State Sewer Pipe Company, of Rochester, N. Y.; Sackett Plaster Board of the United States Gypsum Company; local agent for the roofing of the Fords Roofing Manufacturing Company of Chicago, United Roofing Manufacturing Company of Philadelphia, and the Barrett Manufacturing Company of New York city; common and pressed brick of the Onondaga Vitriol Press Brick Company, New York, and a complete line of masons' supplies.

Another old and large lumber yard, which was established twenty-nine years ago in Oneida, is that of R. B. Ruby, at 120 Madison street. The yard covers several acres of ground, has switch tracks running into it from the New York Central railroad and the New York, Ontario & Western railroad. Another switch track is just completed which accommodates twenty freight cars. Mr. Ruby is extending his lumber sheds and will shortly build a large warehouse for storing cement, plaster, etc. He is the local agent for the Atlas Portland cement, handles plaster, lime, sewer pipe and flue lining, wall coping, fire brick, roofing, etc. E. E. Barker has been manager of this large business for twenty-eight years. He said, "Business the present year has been the best I have seen in many a year. We are selling much cement to the farmers in the vicinity of Oneida, and it seems there is no end to the use the farmer makes of it, as he increases his demand with each succeeding year."

CANASTOTA RETAILERS.

Canastota, N. Y., Nov. 17.—One of the conspicuous features in the large coal and lumber yard of the Barrett Lumber Company of this city is the four large coal silos used for storing and handling coal. They are 36 feet in height and diameter in proportion as illustration shows. Combined they hold 1,200 tons of coal, a 10-horsepower motor is used for unloading cars and hoisting coal into the silos. A chute in the bottom is opened and the coal shot into delivery wagons by gravity. It takes just one and one-quarter hours to unload a car holding 40 tons of coal. No shoveling is done in handling coal. In connection with its coal and lumber trade it handles a complete line of masons' supplies. Switch tracks from the New York Central railroad pass through the yard and by its coal silos and warehouse, which has ample storage capacity for cement, lime and plaster. It is the local agent for the Alpha and Universal Portland cements, the famous "Adamant" plaster of Geo. W. Park & Son, of Syracuse, N. Y., and lump lime in barrels. The officers of the Barrett Lumber Company are: Claude B. Ellis, president; Lena B. Plank, vice-president, and Fred W. Plank,

secretary and treasurer. It was established seven years ago and does a large business in Canastota and vicinity in coal, lumber, cement, lime and plaster. Fred W. Plank, its secretary, said: "This year is the best we have ever had; our trade in cement with farmers is increasing by leaps and bounds every succeeding year."

A. E. Dew & Son established the lumber, coal and masons' supplies business on Lumber street in Canastota in 1895. They have a large and exceedingly well arranged yard, into which a switch track runs from the New York Central railroad, accommodating fifteen freight cars. The Erie Canal skirts the northern boundary of their yard, giving them excellent shipping facilities both by rail and water. They handle Lehigh and Atlas Portland cements; "Twentieth Century" and "Niagara" wood fibre plasters of the Niagara Gypsum Company; Chaumont lime in barrels; common, pressed brick and brick of the Onondaga Vitrified Brick Company, New York, with a complete line of builders' supplies. W. F. Dew made this statement: "One-half of all the cement we sell is taken by the farmers in this vicinity, and business this year has proved the best we have had in cement since we started."

LITTLE FALLS RETAILERS.

Little Falls, N. Y., Nov. 16.—The Valley Mills Company on East Mill Street was established seventeen years ago. It is principally dealing in grain, flour and feed. It is the local agent for the Atlas, the Alsen and American Portland Cement Companies; handles plaster and Sackett's Plaster Board, of the United States Gypsum Company, and Connecticut lime in barrels. Mr. Van Allen estimates that he will handle more than ten thousand barrels of cement before the year closes. He reports business fairly good this year and that the farmers' trade in cement this season has been decidedly heavier than any season in the past. The company enjoys excellent shipping facilities. The officers of the company are: James M. Van Allen, president and general manager; Thos. J. Zeller, secretary, and Edmond Van Allen, treasurer. Its storage capacity is 2,000 barrels of cement.

W. B. Newell conducts a flour and feed store at 327 Second street, Little Falls, which was established in 1876. He also handles cement plaster and lime. He is the local agent for the Glens Falls Portland Cement Company, handles the product of the American Hard Wall Plaster Company of Utica, and Connecticut lime in barrels. He also handles Lehigh Portland cement. Mr. Newell reports an ever increasing trade in cement among farmers and that there is nothing to complain about business this year.

CANAJOHARIE RETAILERS.

Canajoharie, N. Y., Nov. 17.—Cement and plaster are handled in this town by two flour and feed stores and one coal yard. O. C. Van Evera & Son, flour and feed store, are the local agents for the Lehigh Portland Cement Company, and A. E. Billinger, the largest flour and feed concern here, handles the Edison Portland cement and the Paragon Wall Plaster Company's plaster, of Syracuse. Both report a big farmer trade in cement. Jones Bros., whose coal yard is on Jones street, named after them, have been in business here forty years. They handle American Wall Plaster Company's (Utica) plaster, and are local agents for the Vulcanite Roofing Company. They report business good.

PITTSBURGH RETAILERS.

Pittsburgh, Pa., Nov. 17.—Most Pittsburgh firms announce that they are busier now than they have been for months. A large amount of street work on hand is being rushed forward with all possible speed by Director of Public Works Joseph G. Armstrong.

As evidence that the season is winding up in a satisfactory manner is the fact that nearly all plants are running full, some of them night and day. The paving brick people are trying to wind up for the season but few of them will close down this month. Stone quarries will probably be the first to shut down for the winter, although there is a large amount of ballast and rubble stone under contract to be shipped before the first of the year. The cement and sewer pipe plants are running strong. Prices are in some ways a little weaker, especially for cement, but the amount of business on hand is so large that it makes a good demand and steady shipments.

Heppenstall & Marquis announce that business is very much better than one month ago, chiefly in cement and plaster. Prices are a little weaker. They are furnishing many contractors for street work and say that the plaster is being sold in better quantities than for several months owing to

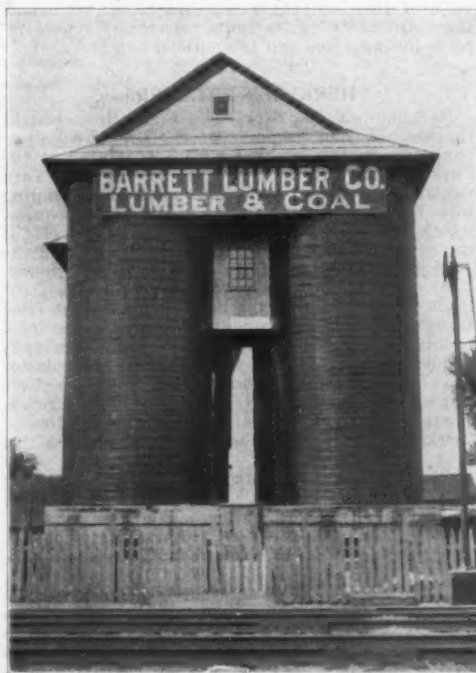
the fact that building contractors are hurrying jobs along with all speed. This concern has all its teams working and could use more if they were available.

Houston Brothers say that trade is pretty fair. This year's business will be with them quite a little better than 1910. There is some slack-up now but in general trade is holding out well. Their increase in 1911 business will be chiefly in the wholesale trade for in some lines of this they have made splendid advances. Pittsburgh city trade is about the same as last year, they say. All their plants are running full.

The Nicola Brothers Company remarked that business is not as good as they would like to see it. They are looking contracts right along, the last one being for a \$70,000 reinforced concrete plant for the Crescent Portland Cement Company to be built at Wampum, Pa. They are just finishing a big job for the Four States Coal Company at its Annabel mine in West Virginia and have a big force of men working on their contract for the Consolidation Coal Company, also in West Virginia.

Knox, Strouss & Bragdon announce that trade is decidedly better. All contracts have been awarded for the year and contractors are hurrying this work along while the sun shines. This firm is busy with a large amount of sidewalk work, most of it being in the suburbs. It has had the best trade in building supplies proper the past two or three weeks of any time for months.

Daniel McNeill of this city has secured from



COAL SILOS OF BARRETT LUMBER COMPANY, CANASTOTA, N. Y.

State Highway Commissioner E. M. Bigelow two contracts for road work in Washington county, Pennsylvania. One amounts to \$6,726 and the other one for 2,300 feet of brick road, 8,300 feet of macadam road to cost \$67,631.

Work on the rebuilding of the Monongahela wharf under Daniel Dinardo has been going forward rapidly. The new roadways will make hauling very much easier and the entire wharf is being repaved with cobblestone. This, with the widening of the Smithfield street bridge adjacent, makes two of the biggest street improvement jobs that Pittsburgh has undertaken this year.

Most of the retailers in Pittsburgh report a very pronounced scarcity of teams. The regular price of \$5 per day is being stretched in some cases where good work can be secured.

Booth & Flinn, Ltd., are busy on the big West End street project, most of the work to be done on West Carson street.

The following contracts were awarded November 1 to Pittsburgh firms for street work: Grading, paving and curbing Corday alley, Booth & Flinn, \$3741.55; grading, paving and curbing Wilkins street, Booth & Flinn, \$18,820.40; grading, paving and curbing Haight's alley, J. B. Sheets Company, \$2,047.21; grading, paving and curbing Herman street, Thomas Cronin Company, \$6,605.38; grading, paving and curbing Thomas street, M. O'Herron Company \$8,158.21; grading, paving and curbing Charles street, Booth & Flinn \$3,716.10; construction of sewer in Valier street, Nick Diulus,

\$459.30; construction of sewer in Seitz street, Thomas Cronin Company, \$518.20; construction of sewer in Canfield street, Ott Brothers company, \$344.95; construction of sewer in Hazelwood avenue, Neelen & Daly, \$1,425.70; construction of sewer in Greenwood street, M. O'Herron Company, \$5,127.50; spouts on Twenty-second street, bridge, Morgan Brothers, \$422; pumping engine for Aspinwall pumping station, Dravo Construction Company, \$37,990.

Miller & Coulson say business is pretty brisk. Their mill for manufacturing paper and cement sacks at Monongahela, Pa., is running day and night. They are selling all the cement blocks they can manufacture at Gibsonville, Ohio, and Reynoldsville, Pa., and proposes to keep both its plants running full tilt just as long as present demand continues.

LOUISVILLE RETAILERS.

Louisville, Ky., Nov. 18.—November is proving to be a notable period of prosperity for Louisville building supply interests. It is always a wind-up month, designed to afford the allied building trades time to finish up their fall work before forbiddingly cold weather commences, and consequently is always a section of rushing business, but this year the thirty days consecrated to Thanksgiving and turkey are fraught with decidedly more than usual labor.

In view of the extraordinarily prosperous summer and fall which building contractors and architects have experienced this year in the Bluegrass state, November, 1911, presents a remarkable mass of unfinished work which must be completed by December 1, or at least before the Christmas month is very far advanced. Consequently roofers, concrete men and other members of the supply fraternity are working with might and main during the prevalent period of mild weather. There is not an establishment in the city which is not working an expanded force every minute of the day, and the prospect for continuance of this enviable state of affairs this year is much better than it was last, or the year before that.

"Business is as good as could be expected at this time of the year, and is considerably better at present than it has been at corresponding seasons in previous years," said George Meldrum, of the Union Cement & Lime Company. "We are supplying lots of jobs through the city that are just being rushed to completion prior to the arrival of cold weather, and we feel that there will be no appreciable slump in activity for the next thirty days, until the unavoidable dull season commences."

The National Roofing & Supply Company, according to Manager Streicher, is being worked to capacity limit these days, straightening out the remnants of an unusually fine season. Very little new work is being booked at present, said Mr. Streicher, but there is plenty in view and the prospect of a building season as soon as 1912 is fairly begun should not require much time in developing booming business.

Samuel F. Troxell, of Samuel F. Troxell & Company, well-known building supply men, is enthusiastic over the season's work as it is rounding out at present. Mr. Troxell said that the coming season was showing signs of premature but very satisfactory development, as he is already figuring a lot of work.

"Our business in Kosmos Portland cement could not be better, considering the season of the year," said John S. Culley, of the Culley Cement Block Company. "Of course, activity in this line is not as pronounced as it was this time last month, owing to a tapering season, but we have absolutely no complaint to make regarding November as a whole."

Willis Reynolds, connected with the cement department of the Culley Cement Block Company, of Louisville, met with a serious accident while riding a bicycle at Twelfth street and Broadway last week. Young Reynolds was hurled from his wheel by a passing street car and narrowly escaped being killed, suffering numerous cuts and scrapes from which he is now recovering.

NOW THE MURBACH COAL COMPANY.

Elyria, Ohio, Nov. 20.—Notices have been sent to the trade that on and after November 1st, the business of the City Fuel and Supply Company will be conducted under the name of the Murbach Coal Company. This company is owned by John Murbach and Ralph Murbach. In addition to handling coal they have a complete line of builders' supplies and the new Bettendorf steel gear wagons. They say business at the present time is especially good as the builders' supply business is still strong and the cold snap has awakened the coal business to full blast.

Broome Construction Company, Harrisburg, Pa., was incorporated under Pennsylvania state laws October 6. Capitalized at \$5,000.

NEW YORK RETAILERS.

New York, N. Y., Nov. 16.—Nothing of special interest has developed in the local building materials trade during the past month. The market continued quiet and dealers are purchasing supplies in a small way. They are following the hand-to-mouth tactics noted of late. Building operations are on the wane and dealers expect a comparatively light trade during the balance of 1911. The local loan associations have recently shut down on the issuing of money in certain building lines and as a consequence operators are experiencing difficulty in obtaining the necessary funds to carry on the work. This restriction is having a marked influence on the demand for building materials and dealers do not look for any improvement until the money market loosens up and this will hardly occur till spring opens.

William C. Morton, of the Consolidated Rosendale Cement Company, in reviewing general conditions in the local building materials market, remarked: "The local building materials trade remained quiet during the past four weeks and is practically at a standstill. Dealers are of the opinion that this will continue during the balance of the year. The Portland cement market has not shown any signs of improvement and is more or less lifeless. We have experienced a fair demand for Rosendale cement and although Portland cement is being quoted at a much lower figure than Rosendale, we are standing pat on our quotation of 80 cents in bulk, at mill."

Speaking in behalf of the United States Gypsum Company, a member of the New York office stated: "Business has fallen off somewhat during the past month, owing to the curtailment of building operations and the approach of the dull winter season. Collections are reported slow. We are, however, optimistic as to the future and look for improvement in business conditions in the early spring."

WEST COAST RETAILERS.

San Francisco, Cal., Nov. 8.—Local building material dealers have felt confident that the volume of business would increase as the season advanced, owing to the satisfactory outcome of the municipal election and the commencement of work on the Exposition grounds, but their expectations are not borne out by the official figures, the valuation of buildings for which permits were issued in the last month being \$1,255,892, compared with \$1,634,048 for September. The record is the poorest of any month this year, but as compared with the figures of October, 1910, when the total was \$1,054,702, the report is by no means discouraging. In November and December of last year building reached its lowest ebb since the fire, but there is little chance of such a decrease this year, as figures are being taken on several important buildings which are fairly certain to be under way before the end of the year. In fact, many of the material dealers find business really more active than it was a month or two ago.

The trade in Oakland, and in fact all over Alameda county, is enjoying quite a prosperous season, building values for the month being the best since last July. Aside from building, the crushed rock business there is helped out by extensive street improvements, and the city will probably let contracts for a large amount of sewer work soon after the first of the year. The record in Los Angeles is far below that of last month, owing to the absence of Class A buildings, but the number of permits issued for small residences is the greatest ever known in that city.

Aside from some large concrete warehouses, and one important office building for which only the foundation contract has been let, most of the new work in San Francisco consists of apartment houses, a good number of which are being built of concrete or brick. There is also a liberal sprinkling of residences, including some of plastered exterior. Several manufacturing concerns are putting up large concrete warehouses at points across the Bay, where conditions seem more favorable to industrial development than in San Francisco proper.

While President Taft broke ground for the Panama-Pacific Exposition several weeks ago, the real work of preparing the grounds has not yet started. The architects in charge, however, promise that their plans will be sufficiently developed to start actual operations within a week or two. Of course considerable work must be done on the ground itself, but operations will be rushed, and it is expected that inquiries for materials will begin to come out soon after the first of the year.

The Hampton Brothers Company, of Atlantic City, N. J., has been incorporated with a capital stock of \$50,000, to carry on a general contracting, building and real estate business. The incorporators are: N. G. Hampton, W. Hampton and I. T. Hampton, all of Atlantic City, N. J.

Philadelphia Construction Company, capitalized at \$100,000, filed articles of incorporation under New Jersey state laws November 9. The incorporators are J. K. and Fred D. Dimmick, of 6473 Drexel road; Edward P. Vogels, 2422 Spruce street, Philadelphia; M. Ria Gane, Wyncotte, Pa., and Frank Moses, Trenton, N. J.

FIRE-PROOF SHEDS.

One day when hanging around the ragged edge of a gathering of retailers at a convention the writer came across a group who were doing what is called giving the horse-laugh to one of the members. Investigation of the cause of the hilarity led to the explanation that he had been proposing to build a new shed and make it fire-proof. It was the idea of him having a fire-proof shed for lumber and building material that struck them all as being so ridiculous that they were guying him about it. It didn't strike the writer that way. What it did was start a real serious train of thought. And the result of following this train of thought is the conviction that the fire-proof shed is the shed of the future for the retailers of building material. Not only that, but it is practical, too, and it is time for us to give more attention to it. Time to start to work building some fire-proof sheds. It matters not that lots of the material going into it will burn readily. A fire-proof shed will furnish protection from the outside and also serve to retard a fire that starts within itself. For that reason and for the further fact that often the fire-proofing of a shed makes for permanency it seems well worth while. There are several plans that can be followed for fire-proofing your shed. One, and perhaps the one this lumberman had in mind, is to make the shed with a steel frame covered over the top and sides with metal siding and roofing. This would give him a shed proof against fire from the outside and especially one that would be safe from stray sparks from locomotives and nearby conflagrations that might occur. Of course, such a shed could be ruined from a fire within, because the fire would warp the steel framing and kink the roofing and siding, but just the same it would serve a good purpose and there was nothing to grow hilarious over about the idea that the progressive lumberman was considering building one in this manner. They are building concrete and steel sawmills today partly for this same reason. And, speaking of concrete, there is the material right at hand to do a whole lot of this work along the line of permanency and of fire-proofing. There are several plans that could be followed in building a shed the main body of it of concrete that would make it both fire-proof and permanent. One could build concrete piers at about the distance apart of posts in the regular shed with simply a thin curtain of concrete between and then have a shed that while costing a little more originally than the lumber shed it would make the cost worth while since it is built for permanency. Then there are several chances for getting even lighter construction. One can make the piers or posts of concrete with reinforcing and thus reduce the quantity required. One may take iron piping for uprights to be concreted around, then between these from post to post put a metal lath and use concrete or plaster on this just to make a thin curtain of it from post to post and thus have a good substantial fire-proof shed wall. On top of these could be put a steel frame and either metal or slate, or cement tile roof and even the framework overhead could be covered with concrete if a protection against fire is desired.

In short, there is nothing impractical about the idea of a fire-proof shed, not merely one but a whole string of fire-proof sheds, for lumber and other building material. It is quite the other way around. It looks like it is something appealing and that the idea is worthy of earnest consideration. It would not only make for permanency and add to the appearance of the place, but sheds of this kind properly constructed should enable one to reduce the insurance enough that the saving in this matter alone would meet the interest on the additional investment required. The fire-proof shed is an idea along the line of progress and let us not only give it consideration, but get busy, make some plans, and build some of them.

The Starnook Company, of Manhattan, has been incorporated to do a general building and real estate business. Capital stock, \$25,000. The incorporators are: E. D. Kellog, C. D. Park and G. H. Noll, Jr., all of New York City.

The Friestedt Underpinning Company, of Manhattan, has been incorporated with a capital of \$25,000, to carry on a general contracting, building and real estate business. The incorporators are: L. P. Friestedt, Chicago, Ill.; S. Ford, Brooklyn, N. Y., and H. W. Smith, of Larchmont, N. Y.

OHIO'S SEVENTH ANNUAL.

The seventh annual meeting of the Ohio Builders' Supply Association will be held at Dayton, Ohio, Thursday and Friday, January 25 and 26. The Ohio retailers are one of the liveliest aggregations of this country. They do things. It is greatly to be regretted that retailers all over the United States cannot be present at one of these gatherings and see with what vim and vigor the Buckeye dealers handle their problems. The coming meeting will, no doubt, be very largely attended since there are many subjects of vital interest which will be taken up at this time.

The Douglass Construction Company, of Queens, L. I., has been incorporated with capital stock of \$50,000 to do a real estate business and carry on construction work. The incorporators are: D. D. Case, Jr., C. E. Schramm and W. Rapp, Jr., all of Woodhaven, L. I., N. Y.

The Central Illinois Fuel Company, of Rock Island, Ill., has been incorporated with a capital stock of \$25,000 to do a general fuel, sand and gravel business. The incorporators are Frank N. Goddard, Frederick W. Young and Henry C. Kohl.

The Aiken Constructing Company of New Jersey has been incorporated to do a general building, contracting and real estate business, with capital stock \$100,000. The incorporators are: S. S. Smith, C. A. Terrill and W. E. Essets, all of Newark, N. J.

The Lewis Construction Company, of Chicago, has been incorporated at Chicago with a capital stock of \$2,000 to do general contracting and building business. The incorporators are Chas. R. Lewis, Anna B. Davidson and John Vandenbergen.

The Oliver Scollitt Construction Company, of Chicago, has been incorporated with a capital stock of \$10,000 to do general construction work on buildings, wharves and bridges. The incorporators are Oliver Scollitt, M. A. Odell and A. G. Hodge.

The Phillips Construction Company, of Camden, N. J., has been incorporated to carry on a contracting and building business, with a capital of \$25,000. The incorporators are: W. R. Carroll, G. Pancoast and J. E. Fagen, all of Camden, N. J.

The Frederick Kilgus, Inc., of Newark, N. J., has been incorporated to carry on a building and contracting business, with a capital stock of \$100,000. The incorporators are: F. Kilgus, H. Kilgus and B. H. Kilgus, all of Newark, N. J.

The Van Orin Farmers' Elevator and Supply Company, of Van Orin, Ill., has been incorporated with a capital stock of \$6,000 to deal in grain, lumber and coal. The incorporators are Joseph Braden, Mark Brown and Fred Mollen.

Charles E. Barquist & Company, of Chicago, has been incorporated with a capital stock of \$2,500 to do carpenter and general contracting business. The incorporators are Charles E. Barquist, Martin E. Barquist and Ida C. Barquist.

A. C. Peterson & Company, of Chicago, has been incorporated with a capital stock of \$3,000 to do a general construction and contracting business. The incorporators are George A. Chritton, R. A. Schaefer and A. C. Fischer.

The B. Wright Construction Company, of Kansas City, Mo., has been incorporated with a capital stock of \$2,000. The incorporators are V. B. Wright, R. W. Wright and L. R. Wright.

The Municipal Improvement Company has been incorporated at Kansas City, Mo., with a capital stock of \$100,000. The incorporators are J. C. Rice, J. H. Cramer and M. Perdue.

T. Harrison Gibson, Inc., Toms River, N. J., real estate, builders, contractors, etc., obtained a charter under Delaware state laws October 31; capitalization, \$20,000.

The White River Construction Company, of St. Louis, has been incorporated with a capital stock of \$5,000. The incorporators are Warner S. McCall, Harry C. Loer and Sidney Cook.

West Coast Construction Company, Wilmington, Del., was incorporated under Delaware state laws October 25; capital, \$1,000,000.

The Wildwood Builders' Company, of Fort Wayne, Ind., has increased its capital stock from \$50,000 to \$125,000.

CEMENT

Association of American Portland Cement Manufacturers

Meets Semi-Annually.

OFFICERS

E. M. Hagar	President
W. S. Mallory	Vice-President
John B. Lober	Treasurer
Percy H. Wilson	Secretary
R. W. Kelley	
T. H. Dumarry	
W. H. Harding	
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Geo. S. Bartlett	
John N. Morron	
Chas. H. Zehnder	
Bethune Duffield	
R. W. Lesley	
S. B. Newberry	
Conrad Miller	

Executive Committee

PORTLAND CEMENT MANUFACTURERS MEET

The Association of American Portland Cement Manufacturers will hold its annual meeting at the Hotel Waldorf on December 11, 12 and 13. The program for the three days' session is as follows:

Monday, December 11, will be devoted to committee meetings, with a meeting of the executive committee at 8 o'clock that evening.

Tuesday, December 12, will be devoted to the regular business of the association. The annual dinner will be held on Tuesday night at 7 o'clock.

Wednesday, December 13. Meeting will be devoted to the consideration of the subject of "Accident Prevention and Relief." This meeting will be addressed by several gentlemen who have made this subject a study.

As this is the annual meeting, no doubt there will be a large attendance. Matters of great moment in the industry will be taken up and thrashed out.

SEABOARD CLAIMS MUST BE FILED.

New York, N. Y., Nov. 17.—In the suit of the Fidelity Trust Co., in foreclosure proceedings under a \$2,000,000 mortgage against the Seaboard Portland Cement Company and the Atlantic Clinker & Cement Company, Judge Ward, in the United States Circuit Court, issued an order authorizing William F. Allen, as receiver of the Seaboard company and the Atlantic Clinker company, to notify all creditors that claims must be filed before November 29, 1911, with Bradford Butler, special master appointed in the case, otherwise the claims will be barred. Judge Ward also orders that holders of bonds under the mortgage and deed of trust to the Carnegie Trust Company, as trustee, shall serve their claims upon the Fidelity Trust Company, as substitute trustee.

PROFITABLE FORM OF ADVERTISING.

The guessing contests conducted by the Universal Portland Cement Company, have proved a very profitable form of advertising. These contests are held in connection with county fairs and meetings of Farmers' Institutes. Attendants at these gatherings were allowed to guess upon the amount of Universal Cement shipped to the county within a year and as prizes were given from twenty-four to sixteen sacks of cement. At Greenville, Ill., George O. Morse, proprietor of the Greenville Concrete works, conducted a contest; at Belvidere, Ill., Omar H. Wright was in charge at the big Kankakee, Ill., fair. The Kankakee Cement, Tile & Brick Company excited a great deal of interest.

GET REFUND.

Washington, Nov. 20.—The Iowa Portland Cement Co. has been awarded a refund of \$149.17 by the Interstate Commerce Commission, from the Missouri, Kansas & Texas Railway Company on account of excessive rate charged on two shipments from Iowa, Kan., to Opelousas, La., under dates of October 28 and May 28, 1908; also \$20.60 on one shipment of cement from Iowa to Cheneyville, La., August 7, 1908; also \$145.16 on account of three cars cement, Iowa to Jennings, La., March 27 and August 5, 1908, and February 19, 1909, all from the M., K. & T.

WILL INCREASE CAPACITY.

Birmingham, Ala., Nov. 19.—The most important development in local cement circles is the announcement of the Standard Portland Cement Company, whose general offices are located in Birmingham, to increase its capacity.

The plant of the Standard company, one of the most aggressive factors in the cement trade of the middle South, is located at Leeds, Ala., a few miles from this city.

Leeds was founded by J. B. Elliott, the noted railroad and construction engineer, who is known as "The Duke of Leeds."

At present the Standard plant has a capacity of 1,300 barrels a day or 500,000 barrels a year. The improvements decided upon at a meeting of the directors of the company, held in Richmond, Va., on last Saturday, will double the present output, running to 1,000,000 barrels per annum, and will cost upwards of \$500,000.

The plant now employs 500 operatives and represents an investment of about \$650,000, the contemplated enlargements increasing the investment to \$1,150,000 and doubling the number of employees.

The Standard Portland Cement Company is only five years old, having been established in 1906, but it has been steadily enlarged until its initial capacity, in its first year (100,000 barrels), has already been quintupled and now is to be again doubled.

The enlargement is due to the belief of the management that even double its present output can be readily marketed, enough orders for future de-



J. I. McCANTS, SALES MANAGER STANDARD PORTLAND CEMENT COMPANY.

livery being in hand now to require full time operation for the next six months, with a steadily increasing demand.

J. Ross Hanahan, of Charleston, S. C., is president of the company, while the board of directors includes Frederick Effinger and Charles Catlett, of Staunton, Va.; Richard Smith, cashier of the Planter's Bank, Richmond, Va.; F. H. Lewis, Birmingham, and John Herz and Mr. Hanahan, of Charleston, S. C.

An active selling force for the Standard product is the Carolina Portland Cement Company, which has large branches, carrying heavy stocks, in Richmond, and other Atlantic coast points, Atlanta, Chattanooga and Birmingham, through which heavy sales of the Standard brand are made.

J. I. McCants, one of the ablest and best posted authorities in the whole South, is in general charge of sales and a great number of the very large contracts secured for the Standard brand were landed by him.

Possessed of wide knowledge of the field, and all of its requirements, with a splendidly-organized system for gathering news, keeping in touch with the various selling points, maintaining close relations with customers and advertising the Standard trademark and what it stands for, Mr. McCants has not only built up a wide and growing demand for the Standard brand, but has also maintained a high good-will which effectually reinforces all other selling plans and assures the soundness of the belief that double the present output of the plant may be sold during 1912.

Among some of the large contracts sold in the recent past by the Standard forces under Mr. McCants are: Tennessee Coal, Iron & Railway Company, Birmingham, 200,000 barrels; Goat Rock dam, Columbus, Ga., 150,000 barrels; Ensley dam, Tennessee Coal, Iron & Railway Company, 50,000 barrels; Southern Railway, 50,000 barrels; Dillingham street bridge, Columbus, Ga., 30,000 barrels, and many other smaller projects, including the new Y. M. C. A. building in this city, for which the Southern Ferro-Concrete Construction Company, of Atlanta, the builders, bought 3,000 barrels.

GEORGIA PORTLAND CEMENT COMPANY.

The Georgia Portland Cement Company is the name of the new enterprise recently organized in Atlanta, Ga. The company has been organized to develop the cement rock on the large acreage recently purchased by The Horine Development Company, of Atlanta, at LaFayette, Ga. The company will be capitalized at \$500,000, and some of the most prominent capitalists of Georgia will be interested, among them being H. L. DeGive, owner of the "Grand" and several other theaters, E. M. Horine, banker; T. Poole Maynard, E. L. Worsham and George M. Napier, of Atlanta, and Geo. Harrington and Wm. Soaper, of Detroit, Mich.

It is understood a site has been selected for the plant and a committee has been appointed to have plans and specifications prepared, while the Central of Georgia Railway, which is understood to be favoring the development of the various properties now owned by the Horine Development Company, has announced a branch line will be built from LaFayette direct to the plant.

These same capitalists announce a company for the manufacture of lime, with \$25,000 capital, has also been formed and as all of those interested are known to be men of large financial ability and successful records it is generally believed the plans, as announced, will be executed, promising the development of a rich section of Georgia on a vast scale.

RIVERSIDE PORTLAND CEMENT CO.

Riverside, Cal., Nov. 20.—The Riverside Portland Cement Company of this place was originally known as the Southern California Cement Company, construction on the plant having begun in 1906. The company later petitioned for a change in name which was granted and the Riverside Portland Cement Company is now operating a 5,000 barrel plant.

MISSOURI FIFTH IN CEMENT PRODUCTION.

Jefferson City, Mo., Nov. 17.—In a Red Book Bulletin soon to be issued by the State Bureau of Labor Statistics on the cement industry of Missouri, Commissioner Austin W. Biggs shows that in 1910 Missouri ranked fifth in barrels of cement produced, as well as in value, while in 1909 Missouri held sixth place.

NEW YORK CEMENT NEWS.

New York, N. Y., Nov. 17, 1911.—There has been very little change in the local cement trade during the past month, and the market continued quiet and lifeless. Prices remained unchanged and 65 cents in bulk at mill is still quoted. The present low price of cement has not induced buyers to stock up, and with the continued weakened tendency of the market there is a decided inclination upon the part of the consumers to hold off and to await developments. Dealers do not look for any improvement in the cement trade during the balance of the year. Many of the large manufacturers are of the opinion that these conditions cannot continue for any length of time and that some of the small concerns will eventually be forced to the wall.

The recent New York election sounded the death knell of the building code which was fostered by the party lately in power. This bill, it will be recalled, advocated the use of hollow-tile manufactured by a certain concern. The code was drawn in favor of the manufacturers of hollow tile and against the concrete interests. That is, it favored hollow tile as a building material, which meant that hollow tile would have to be used for building purposes to the exclusion of everything else. Many prominent architects and builders who saw the injustice of the restriction appeared at public hearings before the mayor and advocated that the code, as drawn, be changed. There was too much discrimination against the concrete interests, they maintained. Forced by public opposition, Mayor Gaynor told Alderman Kennelly that the code would have to be revised to allow the concrete interests an opportunity to compete. The matter was then laid over,

but in the meantime enormous pressure was being brought to bear to have the code, as originally planned, go through. The election, giving the control of all committees, building code and otherwise, to the Fusionists, has killed the code for two years at least.

It is generally conceded, however, that New York needs a revised code, and it is possible that this is one of the matters that the Fusionists will take up as soon as they are seated.

W. P. Corbett, sales manager of Alsen's Portland Cement Company, in reviewing conditions in the cement trade during the past month, stated: "The demand for cement was quiet during the past month. We are going along in a fairly active way, as we have contracts on hand that were made some time ago to supply our cement at a much higher figure than is now being quoted. The present price of cement is the lowest that has been in force for years, but these conditions cannot continue for any length of time. By the turn of the new year you will undoubtedly hear of a few cement mills going to the wall. We have turned down orders at the present quotations as we do not care to do business at a loss."

G. A. Molitor, of the Northampton Cement Company, added: "Nothing interesting has developed in the local cement trade during the past month and the market continued extremely quiet. The price of cement remained unchanged, although the low price prevails, there was very little business transacted. We do not see any prospect for improvement in the trade during the balance of the year. Building operations in this vicinity are practically suspended, but owing to the cessation of work during the winter months business should open up early next spring."

E. B. Morse, of the Frank B. Morse Company, said: "Business during the past month has been coming along in a quiet away and the volume of sales indicates a fair amount of trading. The price of cement remained unchanged at 65 cents in bulk at mill, and we do not believe that an increase in the price will be made until next spring as the present business conditions do not warrant it. In our estimation business will continue during the balance of the year in a hand-to-mouth way."

E. F. Miller, of the Lawrence Cement Company, speaking with reference to the local cement trade, said: "Business was quiet in the cement trade during the past four weeks and I do not believe that there will be any improvement during the balance of 1911. The low price of 65 cents, in bulk at mill, is quoted and some dealers are offering their goods at even a lower figure. We are fortunate in having contracts, made early in the year, to deliver our product at 75 cents to 80 cents, in bulk at mill, therefore, have less complaint to make than our competitors."

S. Wells, manager of the New York office of the McCormick Waterproof Portland Cement Company, added: "We experienced a fair demand for our product during the past four weeks and expect a number of orders to materialize in the present month. There is very little going on now in building operations in New York city, but we have received quite a few jobs outside of this city. We do not look for a heavy amount of business, but expect a fair volume of trading during the balance of the year."

PHILADELPHIA CEMENT NEWS.

Philadelphia, November 16.—There has been no material change in the cement situation during the last month, and no tangible evidence of an advance in trading before spring. Building work has fallen off and the season is too far spent to commence operations on any specially large jobs. Cement sales are of a hand-to-mouth character, and probably equal to amount made, but there is a heavy stock in the yards of the manufacturers which is slow to diminish, in consequence of which values are not liable to advance. The election held on November 7, ended in the defeat of the so-called contractor gang, and in the purified order of things, honest work and honest competition in municipal jobs may now be looked for. The large storage house of the Allentown-Portland Cement Company, Evansville, Pa., was visited by fire on October 12. Loss given at \$2,500.

"Mike" and "Joe" Cantillon, owners of the Minneapolis baseball club, recently signed a contract for plans for a new \$30,000 steel and concrete grandstand to take the place of the old one at Nicollet Park.

The Crescent Creamery Company is erecting a \$100,000 concrete building in Minneapolis, Minn.

PRIZES

Offered by the Canada Cement Company Attract Wide Interest and Result in Spirited Competition.

Montreal, Que., Nov. 20.—The Canada Cement Company, Limited, of Montreal, Canada, is conducting a prize competition which has been meeting with wonderful success. The prizes offered are as follows:

The Prizes.

Prize A—\$100.00 to be given to the farmer in each province who will use during 1911 the greatest number of barrels of Canada Cement for actual work done on his farm, competitors at close of contest to furnish receipts from local dealers, showing amount of cement bought, the amount of work done to be checked up, if necessary, by our travelers, who are always so near as to be able to visit any farm upon short notice.

Prize B—\$100.00 to be given to the farmer in each province who uses Canada Cement on his farm in 1911 for the greatest number of purposes (quantity considered). For instance: If two men in a province each use Canada Cement for four things, say a horse trough—a root cellar—a feeding floor for hogs—and a barn foundation, then the one who consumes the most cement would be entitled to the prize, dealer and our traveler to be referred to as in Prize A.

Prize C—\$100.00 to be given to the farmer in each province who furnishes us photographs showing best of any particular kind of work done on his farm during 1911 with Canada Cement. In this prize, work of any and every description is included, and many photographs, ranging from the smallest to the largest piece of work done on the farm, will be received, and the best carefully selected by a disinterested committee of experts appointed by this company; our traveler, if necessary, to visit your farm and verify that the photograph is of actual work on the farm as reported.

Prize D—\$100.00 to be given to the farmer in each province who furnishes the best and most complete description of how any particular piece of work, shown by photograph sent in, was done, dealing with the cost of work—dimensions of same—kind of aggregates used—proportions of aggregate used—proportions of cement used—number of men employed—number of hours actual working time required—method of mixing—kind of forms used—method of reinforcing, if any—month of year, etc. In this prize, also, separate descriptions covering as many different kinds of work as you have sent photographs for, will be received, carefully considered, and the best selected by committee of experts as in Prize C.

By way of explanation, the Canada Cement Company say that they were encouraged by the keen interest which had been taken in their educative campaign, and for that reason decided to go further along these lines and offer a series of four \$100.00 prizes in each of the nine provinces, Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia. The prizes are divided up in such a manner that there is practically a separate competition in each province. The provinces compete within themselves but not with each other. The reason for this is obvious. They want to give every farmer a chance to be successful, and to do this it was necessary that they should as far as possible compete under the same conditions. Many photographs, descriptions, etc., have already been sent in. Among the unique contributions received is a Scotch poem written by the wife of a farmer in Ontario, which we print herewith.

"Canada Cement."

By Mrs. W. Buchanan,
Ravenna P. O., Grey County, Ont.

Ye Farmers a', on you I ca'
Tae see if ye hae kent
The uses, different uses o'
And merits o' Cement.

If ye hae no, I'll tell ye noo,
I'll tell ye fair and square;
Ye'll never get a better thing,
For building or repair.

First buy Cement, and money spent
This way, you'll find is gain;
Then mix it right, and tamp it tight,
T'will dry as hard's a stane.

And it will last and stand the blast,
Where nothing stood before.
If once a job is done O. K.,
T'will ne'er need doing more.

In days gone by, materials used
Were wood, and stane, and steel.
That they were guid, I hae nae doot,
And served their purpose weel.

But noo the world is moving fast,
As ne'er before it went;
And in this age, what's all the rage,
Is "CANADA CEMENT."

One of the most interesting photographs received is that of an old farmer and his wife, each with a hoe mixing concrete on a platform and each with a Canada cement bag as an apron.

W. H. Ford is the general sales manager, and the Canada Cement Company feels greatly encouraged over the success of his scheme and believes that it will encourage a more intelligent use of cement by the farming element. Canada, like the United States, has gradually awakened up to the fact that the farmer can be relied upon to use a vast quantity of cement if properly instructed. A great deal of the literature which they have distributed has been an educational nature and has born fruit. Mr. Ford is very enthusiastic over the outlook across the border.

DETROIT CEMENT NEWS.

Detroit, Mich., Oct. 18.—Business in the local cement market has been rather lifeless during the past month. Although plants have been operating steadily during the summer, there has not been the same feeling of confidence in the market that usually exists at this time in the year. In the Detroit district plants have been operating night and day at times, but manufacturers report that much of the output is being shipped east. The quotations are low, in fact nearly equal to the lowest quotations on record, and there have not been many changes during the month. Michigan manufacturers say they have not made the same profits out of their cement this year as in recent seasons, and they are looking forward to 1912 with a view of recuperating. Large accumulations of stock are reported in different districts, and there is little chance of working them off until spring. There are authorities in Detroit who declare some of the smaller concerns will not be able to run as usual this season, and that extreme care will have to be taken to prevent bankruptcy proceedings in some districts.

The Wyandotte Portland Cement Co., located in Wyandotte six miles below Detroit, has been operating steadily during the summer months, and the firm reports an improvement in the year's business. This company has slightly enlarged its plant during the year.

The New Aetna Portland Cement Co., of Fenton, under the supervision of W. H. Simmons and his corps of assistants, continues to smash records in production. The company has been shipping more than 35,000 barrels every month for quite a while, and the members of the firm are anticipating a high mark for plants of its size.

Some years ago the M. I. Wilcox Co., of Toledo, one of the creditors of the defunct Egyptian Portland Cement Co., of Fenton, filed a petition asking that a receiver be appointed for the company. The request was granted, and the receiver filed a petition asking that his powers be widened, and that he be given permission to go ahead and clean up the affairs of the company. Various matters came up, and it was finally brought into court again, this time the judge declaring the claim of the M. I. Wilcox Co. should be paid in full. The bond holders will come third in the final settlement.

George Burt and Frank Monaghan, manager and superintendent, respectively, of the Burt Portland Cement Co., Bellevue, have worked out a scheme by which the plant will not be operated on Sundays hereafter.

The Saginaw Sandstone Brick Co., of Saginaw, has operated its plant uninterruptedly since the beginning of the season. The output has been sold as rapidly as was fit for delivery. The stock to be carried over until next spring will be limited to what can be manufactured after the building season this fall.

F. A. Bowers of Belvidere, Ill., has bought the interest of Charles Frederickson of Rockford in the Belvidere Cement Products Company. The company has plans for making cement blocks for silos as well as the manufacture of the tile and other articles they are now making.

CLINCHFIELD PORTLAND CEMENT

Now Being Manufactured at Kingsport, Tenn—Plant and Its Equipment is Modern in Every Respect and the Transportation Facilities Are of the Best.

The magic wand of development has been applied to the vast natural resources of East Tennessee and the entire Appalachian region by the railroads which have been built there in the last few years, prominent among which is the Carolina, Clinchfield & Ohio, but no community has been benefited more largely than Kingsport, Sullivan county, in the heart of the most picturesque region of all that section.

Situated twenty-seven miles from Johnson City, the site of the National Soldiers' Home, in a beautiful and extended valley of the Holston river, Kingsport is well-situated from a commercial standpoint, being on the main line of the C., C. & O., with accessible physical connections with not only the Southern Railway, but the Seaboard Air Line and the Norfolk & Western.

Kingsport was once, for a brief span of years, the capital city of Tennessee, though this fact is known to but few nowadays, and is rich in historical significance as well as in natural wealth. It was near Kingsport that the celebrated battle with the bloodthirsty Cherokees under Dragging Canoe was fought in which the whites, in a telling victory, established the Caucasian standard in fertile forests which to that time had been held wholly by the Indians.

The peculiar distinction of having operated the first cotton factory in the south also belongs to Kingsport, F. A. Ross having been the pioneer in this industry. And, just a few miles east of Kingsport, at Pactolus, the first nail factory west of the Allegheny mountains was established by Stephen Holston, for whom the Holston river is named, and it is generally understood this was at the same time the first metal-working plant of any kind in the territory mentioned.

Far more important than the musty records of yesterday, however, to Kingsport, are the deeds which have been accomplished "today" and to say that the constructive vitality displayed, when the pristine town of a few years ago is considered, seems almost beyond the grasp of the ordinary mind, and yet is but true.

The Kingsport Brick Company has completed a \$100,000 plant, a gigantic lumber company is now developing the timber interests of the adjacent areas, the Kingsport Slate Corporation has undertaken large operations; banks, hotels, modern fire-proof buildings in blocks have been erected, streets have been laid off and paved, scores of handsome homes have been erected and a broad, macadamized highway to Johnson City has been projected and construction inaugurated, all where but a few years ago only virgin forests or rich farms, so large they were practically uncultivated, lay.

Ranking above them all, however, in amount of investment, in number of employees, in value of product, and in size of plant and largeness of operations, is the Clinchfield Portland Cement Corporation.

The Clinchfield Portland Cement Corporation was organized and the plant constructed as the result of finding large deposits of materials ideal in composition and condition for making a uniform, high-grade, Portland cement, and is so located as to be convenient to excellent fuel and with unequalled facilities for distribution, this latter feature being one particularly interesting to every user of cement.

The corporation's property, including mill and quarries, covers 400 acres, the mill site alone ex-

tending half-a-mile parallel with the C., C. & O. right of way, midway between the railway and the Holston river, from which it draws its water supply.

The Clinchfield's limestone quarries are a short distance south of the plant, on the railroad. The stone is exceptionally pure, averaging ninety-six per cent carbonate of lime and less than two per cent carbonate of magnesia, the quality and large extent of the stone making it a most valuable asset in manufacturing a high-grade product with a low quarrying cost.

The quarrying equipment comprises two 125-horse power horizontal high-speed engines, with direct connection to a two-phase 220-volt, 200-kilowatt generator and Ingersoll-Rand belt-driven compound compressor, furnishing air for the drills and three No. 6 Gates gyratory crushers, motor-driven, together with the necessary hoists and other mechanism. The stone is blasted from an open working in the side of the hill and loaded into steel dump-



DAVID H. HOUSTON, SALES MANAGER, CLINCHFIELD PORTLAND CEMENT CORPORATION, KINGSFORT, TENN.

cars, operated by gravity to the foot of an incline leading to the crushers.

Drawn up by an electric automatic hoist to the battery of three Gates crushers, the stone is crushed and discharged directly into the boot of an elevator, thence either into storage bins or standard fifty-ton steel hopper bottom railway cars, fifteen of which are required to handle the daily flow of crushed stone.

On reaching the plant the stone is dropped through the hopper bottoms, from a steel trestle, to the plant storage bins, which have a capacity of a week's supply of stone, 4,500 tons.

A belt conveyor withdraws the stone as required and tranships it through a tunnel into the mill.

The heavy deposits of shale, with a visible supply large enough to last 250 years, are only about one hundred feet from the mill, composing a "razor-back" hill with a maximum height of something over two hundred feet and nearly half a mile in length, with a width of about an eighth of a mile. The entire hill has been tested and the analyses showed a variation of only three tenths of one per cent in any single constituent, a remarkable showing when the variable quality of some basic materials is known. This shale is handled almost entirely by gravity.

Excavated from surface workings the shale is loaded in small, self-loading cars, falling by gravity directly over a pair of Jeffrey spiked rolls, and is discharged by these on a belt conveyor, which distributes it into any one of three bins in the shale storage building, each one of which holds enough for a single day's run.

A single belt conveyor will discharge a bin to the mill proper as required, the same system drawing both stone and shale as required and depositing the quantities in Richardson automatic scales. These scales are set by the chemist in charge at the desired weight and are electrically emptied when each hopper has been filled to the requisite weight. From the scales the two materials drop through a chute into two Pennsylvania type S-5 hammer mills, each driven by an individual motor of seventy-five horsepower.

The material is next hoisted to two cylindrical revolving dryers, each of them six feet in diameter and sixty feet in length, each dryer being equipped with angle irons, by which the material is thrown into the current of hot gases passing from the fire-box in front, a mixing process being carried out at the same time.

The dryers are operated by individual three-phase motors and discharge the dried and mixed materials into a continuous pan conveyor circling through a tunnel to the raw-grinding room, where a grinding process, first, then a pulverizing process, prepares it for burning.

The mixed materials are elevated into steel bins over five S-6 type Pennsylvania mills. These bins hold a fifteen hour supply, so that the mixing and drying buildings are operated only during the day time, or sufficient time to fill these bins from which the mills are supplied at night. After working through this last battery of Pennsylvanias the mixed product is elevated and conveyed into bins, from which it is drawn by roll-feeds into nine Allis-Chalmers tube mills, each 22 feet long, by 5½ feet in diameter, and each direct-driven by a ninety-horsepower motor. In these Allis-Chalmers mills the product is "dusted," or given its final pulverization, and thence is burnt, after having been ground into an impalpable powder being elevated to the bins over the rotary kilns.

There are five of these kilns, each 8½ feet in diameter and 125 feet in length, lined with highly-refractory fire-brick made especially for the Clinchfield's kilns. Nine-inch brick in the clinker zone and six-inch brick for the remainder of their length was used, a fire-bricked stack, 100 feet high, capping the rear of each kiln.

The kilns are turned by gears operated by variable-speed induction motors, governed by controllers placed convenient to a stand for the operator. The kilns are also furnished with a movable front of fire-brick, which can be rolled aside when entrance is necessary to reline or repair them.

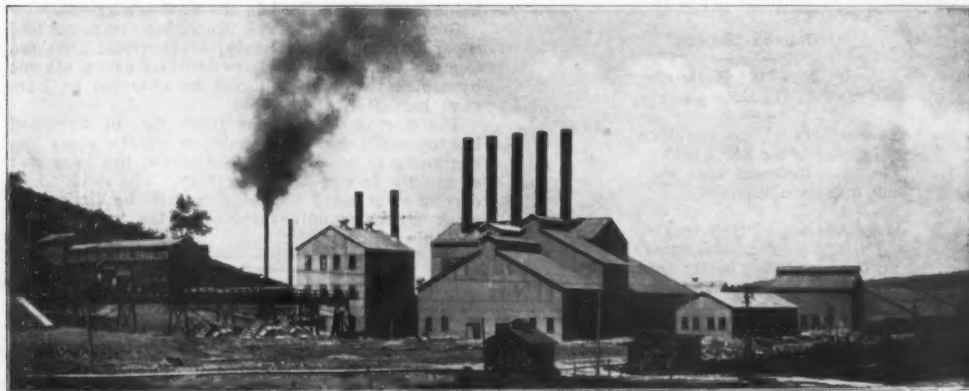
Pulverized coal, for the kilns is prepared in the fuel mill adjacent to the kilns. After being dried in a Ruggles-Cole No. A-9 dryer, thirty feet in length, the coal is ground in Raymond pulverizers, separators conveying the finely-ground fuel to the kilns, while at the same time turning back the coarse screenings for re-grinding.

In front of each kiln is a coal-storage bin holding a twelve hours' supply and the coal is drawn from these bins by duplex screw conveyors, which, in turn, deliver it to a battery of duplicate low-pressure burners. The powdered fuel thus injected into the kilns ignites readily and produces a high caloric-power, requisite for calcining and combining the raw materials into Portland cement clinker, at which stage it is dropped into a covered concrete pit.

As soon as the clinker can be handled it is elevated into the open, where it is deposited to "weather," from where it is drawn, under ordinary conditions, into the clinker-grinding building to be converted into the finished Portland cement.

If the clinker has absorbed too much moisture, some rainy spell having wet it sufficiently to interfere with its being pulverized readily, it is passed through a reserve dryer, six feet in diameter and sixty feet in length, by which all surplus moisture is driven off.

Before it is taken into the clinker-grinding building the raw product is mixed with the proper proportions of gypsum or calcined plaster to regulate its "set," after which it is elevated through a



PLANT OF THE CLINCHFIELD PORTLAND CEMENT CORPORATION, KINGSFORT, TENN.

pair of corrugated rolls, being crushed to the proper size to be fed to the final mills.

This last process is handled by a battery of twelve Giant Griffin mills. Each mill is driven by an individual 75-horsepower, belt attached motor, and in them the material is given its final pulverizing, being discharged as the finished product, Portland cement, eighty-five per cent fine, through the 200 mesh screen.

From this final stage the cement, as it may now be called, is carried by screw conveyors to the stock-house, a structure 12 feet high by 80 feet wide by 200 feet long, with a capacity of 50,000 barrels.

It is divided into twenty-four bins, twelve on each side, which are supplied or filled by the screw conveyors running down a central passage.

The cement is "sacked" in a packing room located at the farthest end of the stock house, elevators passing it into Bates automatic packing machines, by which it is sacked. From this packing room the sacks can be loaded into cars on either side, tracks having been laid on both sides.

The power plant of the Clinchfield Company consists of two banks of Babcock & Wilcox water-tube boilers, with provisions for additional boilers if required.

The current is generated by two IM-kilowatt Allis-Chalmers turbines, three-phase, 60-cycle, 440 volt, each. Provision has been made in this department also for increased equipment and it is understood a turbine having a capacity of 1,500-kilowatts will shortly be added.

All equipment in the power house is of the most modern type, Tomlinson condensers being used and all pumps being electrically-driven.

The water supply is drawn from the Holston river through a thirty-six-inch conduit and all discharged through a conduit of the same size. This plant is undoubtedly one of the finest and most modern plants in the entire cement world, though it may not be the largest.

To John A. Miller, who is president of the Clinchfield Portland Cement Co., is due the credit for the organization of this company and the erection of this plant, as his untiring energy and creative ability had more to do with the establishment of the plant and its operation than any other single factor.

The plant is entirely fireproof, no wood at all having been used either in its construction or in the construction of other industrial and manufacturing plants which have sprung up nearby, a remarkable feature for a suburban town such as Kingsport is, though it now has a population of nearly 4,000 people.

All of the buildings of the cement plant are constructed of steel, with concrete foundations, covered with corrugated ingot iron, with the exception of the stock house, which is of reinforced concrete.

The other officials of the company are H. R. Dennis, vice-president; W. M. Bennett, secretary and treasurer; E. E. Seagraves, superintendent; Frank E. Walker, chemist, and David H. Houston, manager of the sales department.

Mr. Houston is well known to the cement trade, through his former connection with large eastern factories, and is recognized as a capable man in the position which he occupies.

In the letter received from him a short time ago Mr. Houston stated that the slogan adopted for his product, "Clinchfield is the cement of quality and economy," was finding an appreciative reception in the markets not only nearest to the factory, but in a rapidly extending field and more agency contracts for local distributors could be made than was desired.

"We have not as yet sold any orders amounting to more than 15,000 or 20,000 barrels," continued Mr. Houston, "but the uniform grade and quality of our output is attracting wide attention and we hope to close several very large contracts on which we are now figuring."

"The entire plant has been gotten down to a satisfactory working basis and with everything—raw materials, fuel, railroad facilities and a uniform product of highest grade—in our favor I feel Clinchfield will soon attain such wide popularity among the building trades as to require, beyond a doubt, what we already foresee—an increase in capacity."

LOUISVILLE CEMENT NEWS.

Louisville, Ky., Nov. 19.—The Kentucky cement market is still depressed to some extent, but the situation does not offer any permanently disagreeable features and consequently the mood of the manufacturers is far from pessimistic. Naturally, with the cold weather becoming a fixture in this territory and throughout the country, the prospect for alleviation of the present depressed state is not immediate, but it is predicted that next season the

situation will have entirely cleared up and early in the spring selling period a raise in the price scale is looked for.

The depressed status of the market to the contrary notwithstanding, cement mills in this section are running full time and find ready consumption for their output. The optimistic view which the manufacturers are taking of the situation is substantiated by the plans which are now being made for plant improvement and extension, designed to result in expanded production in line with better price levels next year.

The Kosmos Portland Cement Company has no serious complaint to make regarding the present situation, although the market is slow at present. The general standard is pronounced to be equal in most respects to that of previous Novembers for the past few years. The company's plant out at Kosmosdale is doing fine, with full time schedules in every department and the production well balanced for this season of the year. The Kosmos officials are planning considerable improvements and extensions in their property, to afford materially enlarged capacity, the work to commence early in 1912.

C. M. Timmons, sales manager of the Kosmos Portland Cement Company, of Louisville, returned a few days ago from a business inspection trip through Tennessee. Mr. Timmons visited Nashville, Jellico and other prominent cities of Kentucky's neighbor state, discovering that the field in that section is being steadily enlarged, promising to be one of the most important consuming centers of the South in the very near future.

Charles Horner, vice-president of the Kosmos Portland Cement Company, of Louisville, is now spending a few days in Philadelphia, his native city and place of residence. Mr. Horner is enthusiastic over the success of the White Elephants in attaining world's championship standing for the second consecutive year. The Kosmos executive is almost as interested in doings on the diamond as he is in the cement trade, being himself a crack outfielder of the Louisville Country Club aggregation.

J. B. Speed & Co., according to secretary-treasurer Henry Gray, is well satisfied with existing conditions, although the price scale could be improved and in some respects the market might be faster. The company is rounding out a very successful year, however, said Mr. Gray, and sees no reason to "knock" the situation seriously. The company's mill at Speed's Station, Ind., is operating under a full head of steam, and the prospect of winter is not in the least forbidding.

J. B. Speed, president of J. B. Speed & Co., one of the most prominent cement manufacturers in the country and best-known business men of Louisville, returned a short time ago from his summer home in Rockland Breakwater, Me., where he spent the past six months. Mr. Speed, who is over seventy years old, stated that he was feeling in the best of health and displayed phenomenal energy upon his return to his native city.

A magnificent bronze statue of Abraham Lincoln, presented to the State of Kentucky by J. B. Speed, owner of the Speed cement mills, was unveiled November 8 in the beautiful new capitol building at Frankfort, Ky., in the presence of President William Howard Taft, Governor Augustus E. Willson, of Kentucky, Major Archibald Butt, and dozens of other national celebrities. Mr. Speed and his entire family took prominent part in the dedicatory ceremonies in honor of the Great Emancipator. The statue is pronounced to be the most striking likeness of the martyred president that has ever been produced. It is of bronze, in heroic size, modeled by A. A. Weinman, one of the best-known sculptors in the country. Following the unveiling in Frankfort, President Taft and his retinue boarded a Speed special from Frankfort to Louisville and thence to Hodgenville, Ky., to dedicate the old Lincoln farm, the birthplace of Honest Abe, as a national park upon Greater Kentucky Day.

Engineer E. A. Wilson, of Roswell, N. M., has been awarded a contract to draw plans and specifications for the division dam of solid reinforced concrete, 200 feet long, 23 feet high, across the Delaware river at Red Bluff, south of Carlsbad and north of Pecos City, it is reported.

The Camden Brick & Tile Company, of which J. J. Cole is president, at Camden, Tenn., is now equipping a large, up-to-date plant and will be ready for business in short order.

Alex Carpenter has sold his interests in the Traer Brick and Tile factory at Traer, Iowa, to his partner, Henry Sirrine.

The Jackson Brick Co., of Jackson, Mich., has been organized with a capital of \$40,000.



The Lebanon Brick and Tile Company, at Lebanon, Ky., composed of T. M. Estes and R. L. Goodin, is now equipping one of the most modern clay-working plants in that section of the Bluegrass and will start manufacture in the near future. The new Lebanon plant is being electrically equipped throughout along the most approved lines, and will turn out 40,000 pressed brick per day as well as a quantity of drain tile from 4 to 10 inches in length. The plant will start operations in a few days.

The Union Mining Company, proprietor of the Mount Savage Fire Brick Works, Mount Savage, Md., has recently taken a lease on a commodious suite of offices on the eleventh floor of the new Fidelity Trust building, Baltimore, Md., where the president's offices, as well as those of the sales department, are located. The general accounting, laboratories and manufacturing departments will remain at Mount Savage.

The Jefferson Brick & Tile Company, of Jefferson, Wis., recently installed a new style of drying sheds in its yards. Last spring the company installed new portable carriers and next spring it will be better equipped than ever to increase its output.

The Bluff City Brick & Tile Company has been incorporated at Memphis, Tenn., with \$40,000 capital stock, by P. J. Lunati and others, to engage in the manufacture of brick and tile as soon as an adequate plant can be equipped.

A new brick yard is to be established and put in operation in the very near future near Grayson, Ky., it is reported.

PITTSBURGH CLAY NEWS.

Paving brick people have no fault to find with the situation except that winter will soon be here. Their sales in the past six weeks have been probably twenty-five per cent over the average of the four months previous. In Pittsburgh especially city contracts have brought the total up very rapidly. Borough work is nearly completed and the day will soon be here when by ordinance contractors are not allowed to open city streets until spring. Prices on paving brick have been cut pretty hard but the trade has fared much better in general than the building brick people this year.

H. Walker of this city is largely interested in the purchase of 16400 acres of land in Mineral county, West Virginia, which was closed last week for a price of about \$250,000. It is said that a large operation will be started shortly.

The Pittsburgh-Buffalo Company is running its plant full at White Rock Station on the Allegheny Valley railroad and is turning out a fine lot of face and tapestry brick at the rate of about 100,000 feet per day. Its plant at Johnetta, Pa., under the direction of J. E. Stewart is also busy. The entire sales management of the company's brick interests is now in the hands of James W. Wardrop, formerly secretary of the National Builders' Supply Association, and recognized everywhere as one of the most original and aggressive sales managers to be found.

The Volant Brick Company of New Castle, Pa., of which J. Will Neff is president, expects to have its new plant running by December 1.

The Pennsylvania Clay Products Company has about completed overhauling its plant at Winfield, Pa., and expects to be running in good shape by Christmas. Its prospects for winter business are exceptionally good and it has a fine sales force organized.

Carl Cappel, aged 45 years, one of the best-known brick men in western Pennsylvania, died November 10 at St. Joseph's Hospital, Pittsburgh, following an operation for appendicitis. Mr. Cappel was the largest individual stockholder in the Central Brick Company of this city. He was also president of the Columbia Motor Company. He was better known perhaps to the state as a politician, for he was a delegate to the last Republican party national convention and last year made a very strong race for the Republican nomination for Congress against the successful candidate, A. J. Barchfeld.



LIME IN SUGAR MANUFACTURE.

The sugar industry is making great strides in the United States, especially in regions of the west that only a few years ago were considered arid. Sugar factories line the principal railroads and contiguous to them are vast tracks devoted to the cultivation of the sugar beet. At this time of the year the crop has been gathered and soon the beets will find their way into the vats of the factories.

It is not generally known, but lime is a very important factor in the manufacture of sugar. In the process of manufacturing sugar both carbon dioxide and lime are used. On this account many of the manufacturers have preferred to buy limestone and burn their own lime.

You will be interested in knowing just how lime is used in the process. The juice extracted from either sugar beets or sugar cane contains various impurities. Some of these impurities would discolor the sugar while others, those that are called organic acids, would invert it. In other words, they would change the sugar into uncrystalline glucose, and thus the yield would be reduced and of course it is business sense to produce the maximum amount of sugar from the raw material.

In order to remove the impurities the juice is heated almost to boiling in the presence of an excess of lime. This combines with the acids and breaks up the other organic compounds forming insoluble salts. But in the process it forms an insoluble compound with the sugar itself. For this reason, it may be explained, after the lime has completed its action carbon dioxide is forced into the liquid. Now an interesting action takes place. The carbon dioxide breaks up the combination between the lime and the sugar and throws down all the lime as calcium carbonate. This precipitate carries with it all the suspended matter and leaves a clear solution of sugar.

So it is not difficult to see how important lime is in the process. For the purposes of the sugar factory calcium oxide only is useful. Impurities are apt to cause trouble. Thus, magnesium carbonate is more soluble in sugar solutions than calcium carbonate and the salt so dissolved is later deposited on the tubes in the evaporating pans, thus making it necessary to clean them more frequently. Any silica present is thrown down as a gelatinous precipitate. This becomes a general nuisance by coating the cloth in the filter presses.

PITTSBURGH LIME NEWS.

Pittsburgh, Pa., Nov. 17.—The concerns which produce hydrated lime are working full time and see no immediate let up in sight. In fact, demand is quite as good as one year ago. The agricultural lime season is over and for the next two months nothing will be done by manufacturers in this line. They sold probably one-third more of this product this year than ever before and report that the prospective inquiry from farmers and country dealers for next year is mighty encouraging.

The National Mortar & Supply Company reports a very fair business. At Gibsonville, Ohio, its plant is running full with the exception of two kilns which are down for repairs. Its product there is all hydrated lime. Prices are stiffer and prospects for 1912 seem pretty good.

A new eight ton crusher has recently been installed on the McLaughlin Limestone quarry near Marlinton, W. Va. This quarry turns out a very fine quality of limestone, much of which finds its way into the Pittsburgh district.

A fire November 8th burned plant A of the Standard Limestone Quarry Company, near Martinsburg, W. Va. The total loss was \$2,000, well insured.

The plant of the Washington Building & Lime Company at Bakerton, W. Va., was burned in October with a loss of \$20,000. Daniel Baker, of Baltimore is president of the company.

The Grey Lime Fertilizer Company, with a capital of \$10,000, has been formed at Lisbon, Ohio, by Fred Davis, J. A. Smith and Howard Bye, of that city to manufacture agricultural lime. This is the second concern organized there this year. The Grey company has leased 160 acres immediately south of the town and has already erected one large kiln. It will install a 50-ton crusher and warehouse 150 feet by 50 feet, with three kilns.

The Shenango Limestone Company has been organized to operate in the New Castle, Pa., district. G. M. and H. J. Hosack, of 1415 Park Bldg., Pittsburgh, are interested in the company.

LIME ON THE FARM.

Practical Information is What the Agriculturist Needs for the Improvement of His Soil.

John S. Stitt, of Blairsville, Pa., has made some very interesting comments on an article which appeared in ROCK PRODUCTS last month. There is much truth in what he says because the average trade paper today prints entirely too much technical information, which is over the heads, so to speak, of its average reader. To strike a happy medium is the constant endeavor of the average trade paper editor. To present a matter in as homely language in order to make it understood by every reader is a faculty which but few possess. Believing that the publication of Mr. Stitt's letter will be of interest to a great number of our readers, we are going to print it as he wrote it. He says:

I notice on page 32, an article addressed to dealers who want information on the subject of agricultural lime. Part of the information is probably practical, but the long drawn out descriptions of how to test the soil is simply a waste of paper and ink. There is not one dealer or farmer in 1,000 who would go to the trouble of working out those tests and only a small percentage could do it if they did try it. I am familiar with agriculture lime condition in central and western Pennsylvania and southern New York, and the truth of the matter is this. There is not an acre of tillable ground in this territory that will not show immediate results if the proper kind of lime is used and applied properly. (This, of course, is provided the land has not been limed before.) This being the case, why try to muddle the farmer with intricate soil tests requiring a knowledge of chemistry? If a farmer is in doubt, just tell him to try a few hundred pounds of lime on a strip and note the difference. Any of the forms of burned lime will show him what he needs. The chemical comparison of the different forms of lime in the same article is also misleading. From the chemist's standpoint it is correct, but in practice it is different. Air slacked lime and ground limestone are the same chemically, but to the farmer the slacked lime is worth twice as much as ground limestone, as it is generally furnished. And, in practice, 100 pounds of either hydrate or ground quick lime is much more effective than the same amount of lump or stone lime, as it is generally applied. Also, 1,250 pounds of ground limestone is equal to 950 pounds of hydrate, chemically, but in practice the hydrate is worth three or four times as much as the ground limestone. Another part of the article says that lime for agricultural use should contain magnesia in the ratio of 7 to 4. This is contrary to all the best authorities on the subject. Lloyd, in Science of Agriculture, P. P. Dehlerain, J. Boehm, Prof. G. H. Cook, U. S. Farmers' Bulletin No. 77 and others, all claim that applications of magnesia are not necessary to the soil and when applied in large quantities it becomes detrimental. Magnesia is almost insoluble and is not washed out of the soil in drainage water like lime. The magnesia found in some limes is worth less to the farmer than the carbon in carbonate of lime, and that is nothing. If manufacturers do not know the relative values of their various products, how can they expect the farmers to know what they want?

NEW YORK LIME NEWS.

New York, N. Y., Nov. 17.—The market has occasioned no unusual interest during the past four weeks. The demand for lime was of fair proportion. The building season is practically suspended and there is no chance of conditions improving during the balance of 1911.

General conditions, however, throughout this section manifest a tendency to brighten up and dealers are of the opinion that a good business will materialize in the spring of 1912.

F. F. Comstock, president of the Comstock Lime & Cement Company, reviewing general conditions in the local lime trade, stated: "Business continued along quiet lines during the past month and the aggregate were on a parity with those of October. The recent restrictions put on building money by the loan associations have had a quieting effect on the building trade in general. Conditions in general, however, are becoming somewhat brighter and we look for better business next spring in all lines."

E. B. Morse, of the Frank B. Morse Company, added: "The demand for lime in the local market was fairly good during the past month. The fall demand, however, has not been up to normal and we do not expect it to reach that point this fall. Building operations are hanging fire and there is very little prospect of improvement during the balance of the year."

The Sierra Lime Company's kilns near Sonora, Cal., which have not been operated for the last two years, are to be started up again very shortly by Cornelius Menzes. Mr. Menzes, who has had considerable experience in quarrying and turning lime, will operate the plant under a contract with the company. He believes conditions will soon warrant the installation of another kiln.

The Sheboygan Lime Works, of Sheboygan, Wis., is erecting a new warehouse 60'x90' at New York avenue and South Thirteenth street. The building will have a capacity of 5,000 tons. The company will erect a new office building in the spring. The warehouse will be completed by December 15.



NEW PLASTERING LAW.

New York, N. Y., Nov. 16.—On January 1, 1912, the new law providing for three coats of plaster, viz., scratch coat, brown coat and finish, on lath will go into effect.

The supervision in enforcing the law is vested in the superintendent of buildings, except as may be otherwise construed by the tenement house law.

The records of the building and tenement house departments, showing the number of ceilings which fall during the year, are said to afford sufficient evidence of the need of a law to fix a standard for plastering.

The new statute is Chapter 156 of the Laws of 1911. On May 19th the act received the approval of the governor. It amends Chapter 26 of the Laws of 1909, and comprises Sections 60 to 67, inclusive, and reads as follows:

60. Supervision of plastering by building department.—The building department of every city of the first class shall have jurisdiction over all plastering except where it conflicts with the duties of any other department or conflicts with any law conferring on any other department supervision of any portion of plastering. For such purpose there shall be appointed in each building department in a city of the first class by the head thereof a sufficient number of inspectors to perform such work as is necessary in the enforcement of this article,



G. W. PACK & SON'S PLASTER MILL, SYRACUSE, N. Y.

who, in addition to such qualifications as may be required by the civil service law, shall be competent plasterers of at least ten years' practical experience.

61. Three-coat work required on lath.—All plastering in tenements, apartments, hospitals, schools and other public buildings when on lath shall be known as three coat work, namely, scratch coat, brown coat and finish.

62. Key space.—All ceilings, stud partitions and furred walls in tenements, apartments, hospitals, schools and other public buildings where plastered with lime on wood lath shall have not less than three-eighths space between lath. All grounds and jambs shall mean not less than seven-eighths from the stud.

63. First coat or scratch coat.—First or scratch coat shall be of first quality to be scratched thoroughly to make a key to retain second coat, and shall be thoroughly dry or set before applying second coat.

64. Second coat.—Second coat or brown mortar shall be of first quality. All browning must be straight, true with no unevenness or irregularity of surface.

65. Finishing.—When white mortar, or any other material of a like character is used for finish coat it shall be laid on regular and troweled to a smooth surface showing neither deficiencies nor brush marks.

66. Cornices or coves.—All cornices or coves shall be run straight, true and smooth.

67. Patent plasters.—When patent plasters, such as ivory, acme, windsor, etc., are used, lathing, if of wood lath, shall not be less than one-quarter inch key space. First coat shall be thoroughly scratched to make key to retain second coat, and shall be set before second coat is applied.

68. Nothing in this article contained shall affect the tenement house act and the enforcement of the provisions thereof by the city of New York.

BLACK HILLS

Contain Vast Natural Resources and Many Thriving Industries Have Sprung Up in the District Within the Last Few Years.

Rapid City, S. D., Nov. 18.—The Black Hills contain great natural wealth. This interesting section of the country is not only rich in gold and silver, but gypsum, limestone, shale, brick clay and other materials too numerous to mention. Nature has been very lavish here and, aside from being the mecca for tourists, who find among the Hills all the beauties of nature intensified, it is rapidly becoming a great manufacturing center and in the past two years several large enterprises have sprung up.

Of the most interesting plants that of the Dakota Plaster Company, located at Black Hawk, S. D., possesses possibly greater interest than any other for the readers of ROCK PRODUCTS. This plant is equipped with new and modern machinery and, under the energetic management of Karl E. Winter, a well known plaster expert, is turning out a very high grade of hard wall plaster of all kinds. Although this plant is but little over a year old, it already has a capacity of over 2,000 tons per month and is today not only supplying a rapidly growing trade in this and neighboring states but also is shipping extensively to Pacific coast territory and to British Columbia where they have an unlimited market. The plant contains all the latest machinery which is economically arranged and which is capable of turning out as fine a product as any plant in this country.

The gypsum quarry, a photograph of which we are able to print on this page, shows a solid face of not less than thirty feet now open and is one of the largest and finest beds of gypsum to be found. The analysis of this gyp rock shows it to run 98 per cent pure.

Owing to the rapidly increasing demand for hard wall plaster, this plant certainly has a bright future. Wherever the product has been used it has given universal satisfaction and the trade is building up rapidly. This and the many other industries in the Black Hills is convincing proof that the output of precious metals represents but a small proportion of the wealth covered by this picturesque section of the United States.

The McGraw Plaster Company, of Detroit, Mich., has been operating steadily during the month, and the firm reports being satisfied with business. There have been no changes in quotations during the month.

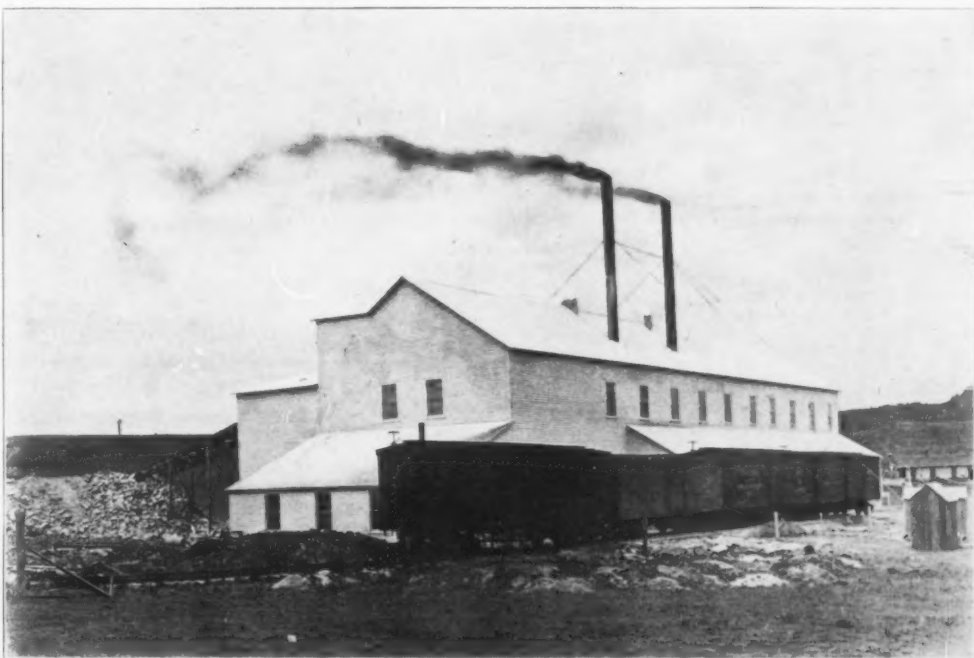
The Schweikart Plaster Works, of Detroit, Mich., has been running steadily for months, and the firm reports a good local and state demand. There have been no changes in quotations with the firm during the month, and the company officials are satisfied with prospects.

C. Ruhle, who has been in charge of gypsum plants at Kankakee and Chicago, has taken personal charge of the United States gypsum plant in Springfield, Ill., at Tenth and Madison streets, and immediately began an enterprising campaign for new business. Several improvements were made at the Springfield plant.

The New Jersey Mineral Wall Plaster Company, of Jersey City, N. J., has been incorporated to deal in cement, stone, lime, brick and lumber, etc., with a capital stock of \$50,000. The incorporators are: G. Witty and B. Berg, of New York City, and J. V. Mulvanterton, of Jersey City, N. J.



PLASTER MILL OF AMERICAN HARD WALL PLASTER COMPANY, UTICA, N. Y.



DAKOTA PLASTER COMPANY'S MILL AT RAPID CITY, S. D.

We are in receipt of a recent communication from the Piedmont Plaster Company, of Atlanta, Ga., who are successors to the Georgia Wood Fiber Plaster Company, who state that last month they sold more plaster than their predecessors sold in any previous four months. Their capacity is 150 tons per day.

During all the time that they have been running this plant they have never had one kick. They are the only plaster manufacturers in this part of the country.

The first shipment of gypsum made from the Nevada-Douglas quarry, Yerington, Nev., was made recently. From now on the company expects to ship about 150 tons per day.

A large and well conditioned bed of gypsum has been located at Meeker, Colo., by J. L. Taggart, country treasurer.

The Robb Engineering Co., Ltd., of Amherst, Nova Scotia, and South Framingham, Mass., have received an order from the Albert Mfg. Co., of Hillsboro, N. B., for three Robb 150 horsepower return tubular boilers. The plaster mill of this company was destroyed by fire some time ago and the



GYPSUM DEPOSIT OF THE DAKOTA PLASTER COMPANY, RAPID CITY, S. D.

QUARRIES

CONVICT LABOR IN ROAD MAKING.

The old question of convict labor bobs up continually. No industry wants to come into competition with convicts. Since time immemorial convicts have been used to build roadways. In olden times the slaves in time became proficient in the work, and some of the old roads were well constructed.

But it is entirely different today, and they not only know nothing of modern quarrying methods, but know less about scientific road building.

One of our most prominent crushed stone operators has hit the nail fairly and squarely in the following article, which we print in full:

Convict Labor.

The question of building roads has been frequently discussed with a view of using convict labor. This is a question that is coming up in almost every state in the union. Without regard to location or local conditions, the writer has no comment to make on this great question except our own great states of Ohio, Indiana and Michigan.

Imagine Ohio, Indiana and Michigan undertaking to build their roads with convict labor. First, Ohio, Indiana and Michigan quarries are equipped with the most modern machinery for up-to-date road building and have kept abreast with the times. In fact more than five million dollars has been spent in the past ten years in improving machinery until today there is no place for any but skilled labor. Imagine a bunch of convicts, some who care little for the safety of themselves let alone others, operating steam shovels, locomotives, cranes, drills and blasting rock. The up-to-date outfits have little if any use for common labor.

The material is taken from the quarry, loaded in small trains of cars by steam shovels, then drawn by locomotives to the crushing plant and crushed, elevated to the separating room, where it is separated into the different sizes for road building. This material is then drawn out into cars and shipped to various points for road building, from which places it is hauled mostly by trains of wagons drawn by steam traction engines, where it is spread on the road by a skilled spreader to agree with the specifications, without being handled by hand at any point. Every man must be fully and perfectly trained for his position and must realize their responsibility in their work. The writer fails to see any place where common labor may enter in this. Road building has become more and more scientific until now it requires diligent and responsible men in all the different departments of road building.

We are not building roads in Ohio, Indiana and Michigan where material was hauled out and broken with hammers as was the custom some years ago and when it required an army of men to break the stone and prepare it for macadam, but we have entered a new field and good roads is stamped on every man's face, and it requires a good road to satisfy him. Common labor, such as we get from convicts, has been almost eliminated from road building. All through Ohio, Indiana and Michigan roads have been built at a less price where the adoption of the new methods, as far as labor is concerned, have been used then it would cost the state to use convict labor.

I would ask you to bear in mind that while convict labor might enter into road building in some states, it would not be practical in many others. The short working season of six months is another hindrance to convict labor being used in Ohio, Indiana and Michigan. If the convict labor agitator would make a study of good road building he would quickly sidestep the idea of convict labor. We have reached the point in the science of good road building which makes it very difficult to obtain skilled labor sufficient to meet the demands.

THIRD ANNUAL MEETING.

The third annual meeting of the Association for Standardizing Paving Specifications will be held at the Hotel Grunewald, New Orleans, La.

The date of the meeting has been changed to the week of January 8 to 13, inclusive, 1912.

Delegates may make reservations through Capt. W. J. Hardee, city engineer, City Hall, New Orleans, La.

In order that the work of the various committees may be expedited and just criticism avoided if possible, the association requests that anyone advocating a change in the specifications as published in the copyrighted proceedings of the second annual meeting held in New York this year, address the proper chairman at once suggesting such changes in writing with the reasons therefor.

All communications addressed to the secretary after January 4 should be directed to the Hotel Grunewald.

John B. Hittell, 5917 Winthrop avenue, Chicago, Ill., is the secretary-treasurer.

The first American Road Congress of the American Association for Highway Improvement and affiliated organizations was held at Richmond, Va., November 20-23. The attendance was large and the results of the convention were gratifying to the promoters. Many exhibits of road material and road-making appliances were shown, and intricate problems of road construction were explained.

INJUSTICE

Being Done the Crushed Rock Producers By the State Highway Commission of Illinois.

We are in receipt of the following interesting communication from John S. Roper, secretary of the Grafton Quarry Company, St. Louis, Mo.:

What you say about a national organization of the crushed stone men sounds good, but as a preliminary step it seems to the writer we should have a good strong state association, which at the present time we do not have. Iowa, Indiana and Ohio have, I believe, good, strong and effective state associations that hold meetings at stated times; as to what they have accomplished towards the betterment of the crushed stone business, I am not advised. Some considerable missionary and educational work will be necessary, however, in Illinois before you can even get the quarry operators of the state to come together.

Enclosed I am handing you a clipping from the "Alton Evening Telegraph" of Nov. 10th, and would especially call your attention to the quotation from the letter of A. N. Johnson, state highway engineer, to the Alton Board of Trade.

We quote from an article in the "Telegraph," as follows:

A. N. Johnson, state highway engineer, in a letter to the Alton Board of Trade says:

"This department will cooperate with you in every way possible to bring about the construction of the roads contemplated. As a general proposition this department assists in the construction of roads in the following ways:

"First—By furnishing crushed stone from the penitentiary at Menard upon application of the township commissioners. This stone is furnished f. o. b. the penitentiary, the commissioners paying the freight, which amounts to 1/2 cent per ton a mile. We find in some cases that material can be purchased from local quarries at a lower price than the freight on the penitentiary stone amounts to, in which case there would be no object in using the penitentiary stone. As a rule crushed stone delivered to points in Madison county from the penitentiary at Menard costs 55 cents to 60 cents per ton.

"Second—By making the necessary surveys and preparing plans for road improvement. You will appreciate the fact that when permanent roads are constructed, it is advisable to eliminate steep grades as far as possible and to lay out the macadam with reference to proper drainage and the greatest convenience to the traveling public, etc. This work is done by the state highway commission without any charge to the township commissioners.

"Third—By furnishing machinery and supervision in the construction of macadam roads. The state highway commission owns a number of steam rollers with the necessary sprinkling wagons and miscellaneous small tools for the construction of macadam roads. These outfits are sent into a township upon request of the township commissioners and a man is furnished to operate the roller and a road engineer to superintend the construction, there being no charge to the township for any of this service. All are perhaps familiar with the fact that considerable macadam work in the vicinity of Edwardsville, Collinsville, Lebanon and O'Fallon has been done in this way. This machinery and superintendence is furnished to the townships whether penitentiary stone is used or commercial stone purchased for the work; that is, the furnishing of the machinery is not conditioned upon the township using penitentiary stone, so that if a township can purchase material at a less price than the freight at the penitentiary stone would amount to, it might still secure the use of machinery from this department."

Mr. Johnson has forwarded to the Board of Trade an application blank for crushed stone, also one for experimental road work, which will explain the conditions upon which crushed stone is furnished and the assistance given in the construction. He also sent several copies of the third report of the highway commission for the use of any persons who may be interested in what has been done along this line in the state during the past few years.

Sometime ago, the state highway commission confined themselves to constructing sample roads of one mile in extent in various localities throughout the state, and their argument then to the quarrymen was that they were doing them a great service, by showing the public samples of good roads, which would be followed up by the people building more roads and purchasing the material therefor from the various commercially operated quarries throughout the state. You will notice, however, from Mr. Johnson's letter, that the highway commission at the present time puts no such restriction upon the quantity of crushed stone they are willing to furnish to one locality. You will further note that Mr. Johnson states that the stone can be had f. o. b. the penitentiary, and the freight would make it cost 55c to 60c per ton, delivered, at Madison county points. Now none of the quarries located at Alton, Elsau or Grafton can furnish the stone to comply with the specifications of the state board of highway commissioners for less than 55c and 60c per ton, f. o. b. the quarries, and we can ship to no point in Madison, Jersey or St. Clair counties for less than 20c per ton freight, and from that up to 35c and 50c, and in some cases as high as 60c per ton.

Now is it fair or just that the state should use the money of the taxpayers to purchase and install stone crushing plants to produce crushed stone for commercial purposes, and then give it away free of cost?

The time was when the state "farmed out" or sold, the labor of the prisoners to various contractors and manufacturers, and received some compensation for their services. This system was abolished because of the competition with free labor. Then, some of the prisoners were, in a measure, learning useful trades; now the state furnishes the capital, establishes the plants, provides the labor, and gives the product away free, and the prisoners are not gaining any knowledge

that will make them self-supporting when they are again free.

The moral would seem to be that a good strong organization of the quarry operators of the state could bring the state government to see the injustice of their present methods towards the quarrymen. If they simply want employment for the prisoners, let them give them hammers, and set them to work breaking stone by hand, or let the state sell its product at its fair market value.

If the state claims that the penitentiaries will be unable to furnish all the material that will be required for the building of good roads, then it is manifestly unfair to tax all the people to furnish free stone to one community and compel another to purchase the stone or do without the good roads.

ENTHUSIASM

Ran High at the Recent Good Roads Meeting Held at Rochester—Stirring Resolutions Proposed.

The American Good Roads Congress, held in conjunction with the eighth annual convention of the American Road Builders' Association, at Rochester, N. Y., November 14 to 17, was by far the best meeting of this association ever held, both in attendance and results. The following were some of the prominent men present from other states:

Gov. Francis E. McGovern, of Wisconsin; John A. Hazlewood, Jefferson; J. H. Van Doren, Birnamwood; John S. Owen, Eau Claire; W. O. Hotchkiss, Madison. Gov. Cole L. Blease, of South Carolina; Hon. F. H. Hyatt, Columbia; Dr. F. H. Colcock, Columbia; Hon. E. L. Archer, Spartanburg. Gov. Albert W. Gilchrist, of Florida; Herbert B. Race, Jacksonville; Hon. Francis B. Winthrop, Tallahassee; Hon. Frank L. Mayes, Pensacola. Gov. B. F. Carroll, of Iowa; Prof. T. H. MacDonald, Ames; W. F. Parrott, Waterloo; J. L. Long, Osceola. Gov. R. S. Vessey, of South Dakota; E. C. Isenhuth, Redfield; J. W. Parmley, Ipswich; J. R. Dalton, Woonsocket. Gov. W. Hodges Mann, of Virginia; Howard Swineford, Richmond; R. H. Wood, Charlottesville; W. N. Tiffany, The Plains.

The prompt response of these chief executives to Gov. Dix's request indicates their interest in highway improvement and shows that they were impressed with the importance of this meeting as an educational factor.

President Harold Parker, of Boston, called the meeting to order at 11 o'clock the morning of the 14th, the Rev. Charles C. Albertson offering the invocation. In the absence of Governor Dix, State Superintendent of Highways Gordon Reed welcomed the delegates in behalf of New York state.

Stone block and concrete block paving were discussed by various speakers and evidences of the extended use of concrete as a road building material were given. It was stated that properly mixed concrete applied with oil, or oil-concrete, as it has been termed, was a thoroughly practical and efficient road material and besides being as cheap or cheaper in first cost was much more durable than other materials now in use or proposed.

John A. Bensel, state engineer and surveyor, spoke on "Highway Administration."

Proposed Resolutions.

Samuel Hill, President of the Washington State Good Roads Association, presented resolutions providing that students at West Point and all agricultural colleges be taught scientific road building, and also for an investigation as to what the federal government is now doing in road building. The resolutions will be taken up by the Committee on Resolutions which will report back to the convention. The resolutions follow:

Be it resolved, By the American Road Builders in congress assembled:

First—That this association believes that the matter of education in road building is of primary importance, and to that end it hereby appoints a committee of three to be designated by the chair, whose duty it shall be to lay before the President of the United States, Congress and the Secretary of Agriculture the request of this association urging the importance of establishing in the military academy at West Point and in the several agricultural colleges throughout the United States a chair or department to be occupied by a man versed in the art of scientific road building and to use all reasonable endeavors to have the intent of this resolution carried into effect in the manner above designated.

Second—That this committee be empowered and directed through the channels above named, or otherwise to ascertain what steps are being taken by the United States government to carry out provisions of article VIII of the Constitution of the United States, which provides for the establishment of post office and post roads.

Third—It shall be the duty of this committee to ascertain what sums of money are now being spent by the National government, if any, for the construction of government highways, and to ascertain what money has been appropriated by Congress and placed in the hands of the Agricultural Department for the improvement of highways, or instruction in the art of building same; and whether in the opinion of such committee the sums so appropriated are being spent to the best advantage.

Fourth—It shall be the duty of this committee to make a report to the executive committee of the American Road Builders' Association and also to the members

of such association through the official organ of this association, and if necessary to urge upon Congress, or other proper governmental authority to take such steps as may be necessary and conducive to the advancement of the cause of highway improvement.

There are many addresses by prominent men on the use of different road materials, addresses explaining the different systems in the several states and all of these were good. Lack of space makes it impossible for us to print these, however.

Nearly every firm of importance in the road material business was represented at the convention with a high grade exhibit. Here follows some of the exhibitors:

American Asphaltum & Rubber Company, Barber Asphalt Paving Company, Austin-Western Company, Universal Road Machinery Company, C. H. Morse & Son, Columbia Wagon Company, National Mixer Company, Dunn Wire-Cut Lug Brick Company, Burlingame Company, Frick Company, J. D. Adams & Co., Munnsville Plow Company, Hetherington & Berner, Buffalo Pitts Company, Gardner Crusher Company, Warren Brothers Company, Dollarway Paving Company, J. I. Case Threshing Machine Company, Watson Wagon Company, Amies Road Company, Mack Brothers Motor Car Company, Troy Wagon Works Company, Burch Plow Works, Texas Company, American Tar Company, Bituminous Road Implement Company, International Harvester Company, Universal Portland Cement Company, Acme Road Machinery Company, Standard Oil Company, Bituminous Road Company, Haywood Wagon Company, Hastings Pavement Company and National Paving Brick Manufacturers' Association.

The meeting closed with great enthusiasm and it was expected that this convention was going to find that it had done a great amount of good work in promoting the good roads question and in furthering the needs of the association to such an extent.

INCREASE CAPITAL STOCK.

The Stone Products Company, of Sandy Lake, Pa., which recently increased its capital stock from \$25,000 to \$50,000 under its charter in Delaware, has taken over the Uber-Breckenridge Sand & Stone Company, whose quarries were located at Sandy Lake, and are operating this property in conjunction with their other property. The stone is white in color and is adaptable for architectural purposes. They also have a big trade in furnace stone, as this stone will withstand intense heat and is one of the highest refractories known. The property is very accessible, being located close to the New York Central lines, and the ledge being above the railroad a great deal of the work of quarrying and loading is done by gravity.

This company has a very thick ledge and a railroad frontage of over 3,500 feet, and fifty acres in all of good stone. They have a fine quality of "silica" that tests .99½ per cent also, and suitable for sand finish, railroad sand, glass, abrasive furnace and foundry practice. They have installed hoists and derricks, drills, etc., and are soon to put in mills and other devices for the extensive operation of their products and the supplying of a rapidly growing trade. The head office is located at Sandy Lake, Pa., the quarries being half a mile east of that place. The secretary is D. G. Bailey. Their stone is a very rare product and makes a beautiful structure, and has been pronounced by some of the foremost architects as one of the finest stones on the market.

Their product is very well known in the steel trade since many of them have been using it for the past two years for furnace linings. It is a peculiar formation, very pure, white and refractory, withstanding upwards of 4,000 degrees of heat. It is also one of the best building stones, as it holds its color well and is very attractive. The deposit is very rare. The product has some very fine possibilities in other lines, in brick making, furnace and foundry practice, as well as the ones mentioned above.

MUCH VALUABLE INFORMATION.

Leroy A. Kling of the Eureka Stone and Ore Crusher Company, Cedar Rapids, Ia., has issued a valuable booklet entitled "Mixing Brains With Farming." This deals with the subject of the use of lime on land and contains much valuable information. Mr. Kling writes that he is distributing these booklets at his own expense and would be glad to send a copy to anyone who is sufficiently interested to write for one.

The Hassel-Coe Construction Company, of Manhattan, has been incorporated to manufacture rock breaking machinery, with a capital stock of \$50,000. The incorporators are: A. W. Hassel, E. Coe, of Jersey City, N. J., and W. T. Criswell, of New York City.

GOOD ROADS

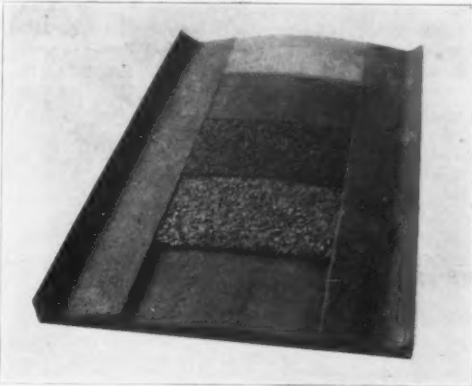
The Office of Good Roads at Washington Shows Manner of Constructing Roads and Some Interesting Statistics Regarding Cost of Hauling.

The Office of Good Roads in its catalogue of exhibits furnishes some illustrations of road building, and the manner of construction. The illustrations used show three types of road—brick, macadam and gravel.

Plate 14 illustrates the construction of a brick road when frost conditions are encountered and differs from other models in that the surface width is 14 feet including the curb. The crown of the completed road is three-eighths inch to the foot.

In section A is shown the prepared subgrade for the foundation course. B illustrates the concrete curbing placed along the edges of the road. C shows a stone foundation 6 inches deep and D a concrete foundation 6 inches deep often substituted for stone. E illustrates a sand cushion 2 inches deep placed on top of the foundation, heretofore described. F gives an example of the surface before grouting. G the expansion joints and H the grouted brick surface road for travel. In the top section also a properly constructed mixing box is shown used in preparing grouting.

Plate 6 relates to macadam road of a width of 16 feet, 6 inches thick at the center and 4 inches thick at the sides when rolled. The crown shown is ¾ inches to the foot, and the road graded for a



SAND BITUMINOUS ROADS.

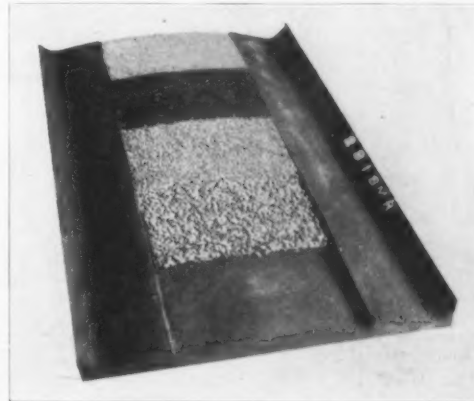
width of 33 feet. Section A is an illustration of the prepared subgrade properly crowned and rolled. B is an example of the first course of broken stone 4 inches thick compacted. C represents the second course 2 inches thick compacted, while D represents the finished road. The best time to prepare for construction of a road of this type is when the weather is moist and favorable to rolling the soil thoroughly, so that all soft spots may be found and filled, and that the ground may be prepared finely and smoothly for the first layer of stone. Shoulders are built on both sides to hold the macadam in place, and should never be less than 3 to 4 feet wide and if necessary 6 to 8 feet.

Plate 5 illustrates a properly constructed gravel road 16 feet wide, 6 inches thick at the center and 4 inches thick at the side when rolled. The crown as shown is ¾ inch to the foot and the road graded to a width of 33 feet. The subgrade A has a center about ten inches higher than the bottom of the side ditches. The first course of gravel is shown in B and after rolling should have a depth of about 4 inches at the center and 3 inches at the side. The second course after rolling is shown in section C. In this section the material is about 2 inches deep at the center and 1½ inches at the sides. In constructing a gravel road the best results will be obtained by separating or screening the material into sizes.

It is interesting to note in this connection some data prepared by M. O. Eldridge, of the Good Roads Office. The compilation is in part as follows: Statistics on road mileage, 1904, in the United States:

Total mileage of all public roads, 2,151,570; total mileage of all improved roads, 153,662; percentage of all roads improved, 7.14. Total mileage of gravel roads, 108,233; total mileage of stone roads, 38,622; total mileage of earth roads, 2,000,000. Percentage of improved roads at present (estimated) which is sufficient to reach around the earth at the equator 80 times, 9-10.

Statistics on expenditures in the United States



BITUMINOUS PENETRATION METHODS.

in 1904. Total expenditure on all public roads, \$79,771,417; property and poll taxes paid in cash and labor, \$53,815,387; for labor tax alone, \$19,818,236; for bond issues, \$3,530,470; from state treasuries on state aid roads, \$2,607,322; expenditure per mile of public road, \$37; expenditure per inhabitant, \$1.05.

Cost of hauling. Tractive force. Estimated power required to pull 1 ton on good clay road 125 lbs. Estimated power required to pull 1 ton on best gravel road 75 lbs. Estimated power required to pull 1 ton on best macadam road 45 lbs. Estimated power required to pull 1 ton on a brick road 26 lbs.

It is estimated that an average sized horse will exert a pressure against his collar all day long of 125 pounds. On the above basis he will therefore draw on

A good clay road, 1 ton
A good gravel road, 1½ tons.
A good macadam road, 2½ tons.
A brick road, (about) 5 tons.
Power required on grades.
On a 5 per cent grade a horse can draw only about one-half as much as on level.
On a 10 per cent grade a horse can draw only about one-fourth as much as on level.

This factor does not change materially by improving the road. The steepest hill on a road fixes the load which can be drawn to market.

Average cost of hauling in United States from 23 to 25 cents per ton per mile.

Average cost in good roads sections from 10 to 12 cents per ton per mile.

Total tonnage of agricultural, forest and miscellaneous products, originating on railroads in United States in 1908, 224,000,000 tons. Estimated tonnage hauled over country roads, 200,000,000 tons. Average distance to market, 9.4 miles.

Estimating the cost at 23 cents per ton per mile, cost of hauling the 200,000,000 tons would be about \$432,400,000. This does not include tonnage hauled to canals, wharves and docks.

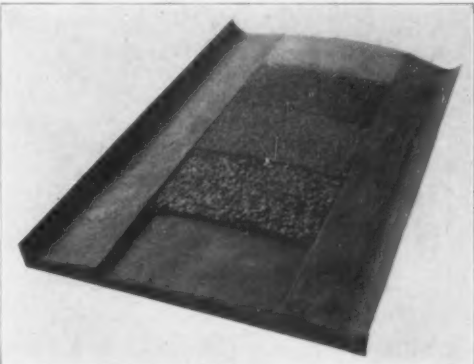
If the main highways were improved and the cost of hauling reduced from 23 cents per ton per mile to one-half the rate, this would effect an annual saving of at least \$200,000,000.

Wheat Crop.

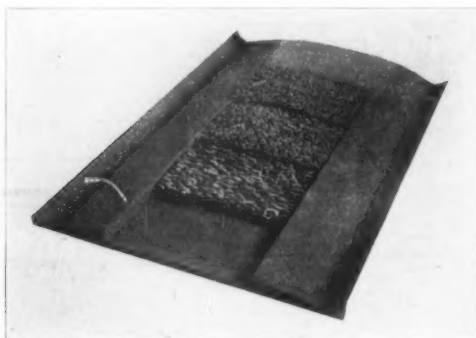
Total tonnage marketed 1905-6, 12,123,000. Average cost of hauling per ton per mile, 19 cents.

Total cost of marketing crop by wagon, \$21,651,678.

Average cost over hard roads per ton per mile, 10 cents.



MACADAM ROADS.



TELFORD CONSTRUCTION.

Saving due to hard roads on wheat crop alone, \$10,256,058.

In 1904 to ship wheat from New York to Liverpool, a distance of 3,100 miles, cost 2.2 cents per bushel, or one-third of what it cost the farmer to haul it 9.4 miles to the railroad station.

Cotton Crop.

Total tonnage marketed 1905-6, 2,530,000.
Average cost of hauling per ton per mile, 27 cents.

Total cost of marketing crop by wagon, \$8,062,173.
Average cost over hard roads per ton per mile, 10 cents.



PLATE 6.—SHOWING CONSTRUCTION OF MACADAM ROADS.

Saving due to hard roads on cotton crop alone, \$5,076,183.

Corn Crop.

Total tonnage marketed, 1905-6, 19,083,000.
Average cost of hauling per ton per mile, 19 cents.

Total cost of marketing crop by wagon, \$26,830,698.

Average cost over hard-roads per ton per mile, 10 cents.



PLATE 14.—SHOWING CONSTRUCTION OF A BRICK ROAD.

Saving due to hard roads on corn crop alone, \$12,709,278.

Effect of Road Improvement on Area of Production.

Total area of all farm lands in the United States in 1900, 850,000,000 acres.

Total area of all improved farm lands in the United States in 1900, 383,600,000 acres.

Effect of good roads is to make it possible to haul larger loads and to shorten the time required to haul to market. With all main highways improved, the area devoted to improved farm lands would be at least twice what it is at present.

Average value of an acre of corn, wheat or oats in United States.....\$7 or \$ 8

Average value of an acre of vegetables in United States 42

Average value of an acre of small fruits in United States 80

Average value of an acre of flowers and plants (not grown in hot houses) in United States\$2,015.35

Good roads make it possible to grow fruits, vegetables, flowers and plants on the farm, which produce larger money returns than cereal crops.

NATURAL MACHINE MEN AND BORN ROUGH-HEADS.

The wear and tear of machinery used for working hard building material is infinitely greater anyway than that of machinery used for woodwork and even for metal working proper. The service is hard and then there is the grit and the dust incident to the work that helps cut out bearings and things of that kind. The service itself is so hard generally that the wear on machinery is a sort of nightmare to the average owner. He, of course, welcomes everything that looks like an opportunity to lessen the wear and tear account and to make his machinery last longer and give better service, but he is never hopeful of prominent results of this kind because there has been so much disappointment in the past and he recognizes that there is nothing that will stand up continuously under the service required. There is one point about all of this though that not only needs specific attention right along, but can be looked after without any actual cost accruing therefrom, and that is the matter of selecting and keeping men in charge of the machines who are natural born machine men and others that are born rough-heads. Some men in charge of machinery are evidently born to the calling and have a natural gift that insures under any ordinary conditions good care of the equipment and reasonably long life, and the best usefulness.

There are other men who seem to be natural born rough-heads and no matter how much training they may have had, or how long they have been in the service handling machinery, they simply cannot help but have trouble all the time; and no matter how good an equipment is given them it is soon in bad order and looks twice as old as it really is and fails to give satisfactory service.

It is almost impossible to mark the line of distinction between them clearly at first, because accidents will happen with the best of men in charge of machines, and machinery will wear out and break and sometimes the best of men will strike a streak of bad luck and have trouble. There is seldom any one thing that is enough in itself to condemn a man, and the same troubles that come to the rough-head machine man may come to the best of them, but they don't come so often. And the greatest trouble of all is, there are no set standards of efficiency to measure men by. Consequently, you have to guess at them.

Still, there is a chance to make a distinction. You can generally tell by the condition machinery is kept in. No matter whether it is a simple hoisting engine or some more complicated machinery used in structural work, you can generally find the man who is born for the care of machinery will keep his equipment in excellent working order and he will keep it reasonably clean. Indeed, cleanliness is almost a guide by which one may distinguish between the natural born machinery man and the natural born rough-head. Of course, any high degree of cleanliness is apparently out of the question with many machines out on excavating jobs and things of that kind, but under any conditions of work there is a distinction readily apparent between method and order around the work and equipment and general slovenliness. When you get an engineer, for example, that is slovenly, scatters his tools and his supplies around in a messy way and lets his engine get messy with grease and everything else, it is time to watch him critically. If in addition to this you find that he is rough at his work, if he takes a hammer and a coal chisel

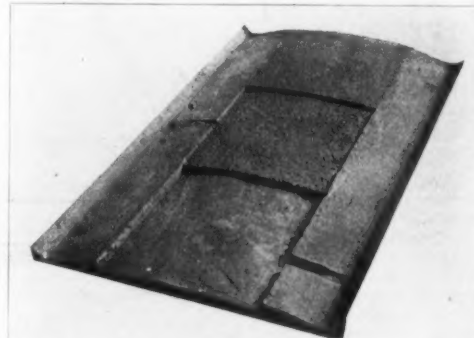


PLATE 5.—SHOWING CONSTRUCTION OF GRAVEL ROADS.

and batters his bolt heads and nuts or batters up a part of his engine or uses his monkey wrench where he should use a hammer, then you can just figure to yourself that the best thing for you to do is to get rid of that man and get a more competent one or one who has a more natural gift for the work. No matter how hard a worker the man is or how cheaply he will work. If he is a good worker and you still want to employ him put him at something else. The life of machinery for outside work is short enough at its best. It is used under very trying conditions and the wear and tear is much more than on machinery that is well housed and remains stationary, and rough or incompetent help in charge of this machinery simply hastens the end and shortens the road to the junk pile. There are men who have a knack for taking care of these things even under the trying conditions involved in contracting. You will know and be able to recognize when you get a man of this kind and he will probably try your temper at times, for you can't excite him or get him to hurry.

But you can stand this and get over it. It is a small price to pay to have a man of this kind in charge and when you get a man that is born to the work as well as trained to competency it is cheaper to keep him at it at twice ordinary wages than it is to put a rough-head in charge at half price. In short, the life of a machine depends as much on the man in charge of it as it does on the original qualities of the machine in itself. And the more valuable the machinery the more important it is to insure its proper care by having a thoroughly competent man in charge of it. We all know this, and the point of distinction it is desired to bring out here is that competency is not merely a matter of training and service, that is, a given number of years in service, but it is often more largely a matter of a man being peculiarly adapted to the care and manipulation of machinery.

PITTSBURGH QUARRY NEWS.

Pittsburgh, Pa., Nov. 17.—Limestone quarries have been very busy with road work all the fall. They are hurrying to finish their contracts as most of them will try to shut down about December 1st.

The Clydesdale Stone Company and the Craig Stone Company are running their plants full. Most of their business recently has been ballast and orders from railroads are coming in with much more encouraging frequency than at any time this year. The Pittsburgh & Lake Erie Railroad has been a large buyer the past month.

The Malone Stone Company has its quarries at Almhurst, Ohio, and Euclid, Ohio, running night and day.

A suit has been started to compel the dissolution of the Castalia Stone Company, at Sandusky, Ohio. J. G. Steincamp and H. L. Hammond, the plaintiffs, claim to own one-third of the stock. The company really had no existence as a working corporation as its assets were purchased by the Wagner Stone Company.

The Higgins Stone Company and the Bellevue Stone Company, of Sandusky, Ohio, have been busy bidding on some big Ohio contracts lately. Their estimates for crushed stone average 90 to 95 cents per ton.

GOOD ROADS ASSOCIATION ELECTS OFFICERS

The National Good Roads Association held an executive session at the Hotel LaSalle, Chicago, November 15. The following officers were elected: Arthur C. Jackson, president; F. A. Delano, George T. Nicholson, C. T. Yoakum, and F. A. Vanderlip, vice-presidents; C. E. Bryan, secretary. One hundred directors from various parts of the country were chosen and provision made to elect officers to represent every state in the Union later.

SAND AND GRAVEL

WEST COAST SAND AND GRAVEL NEWS.

San Francisco, Cal., Nov. 8.—The rapid development in the use of concrete around Portland, Ore., has resulted in a great expansion of the business of firms supplying sand and gravel from the river bed, and while these concerns have installed many improvements in the last year, still further additions to their equipment are found necessary.

The Chase & Linton Gravel Company, of Newburg, Ore., which dredges its gravel from the bed of the Yamhill river, has exchanged its old tug for one of more power and capacity, taking over the tug "Hazel Weir" at Portland. They are installing the machinery in a new hull, and expect to have it in commission by the first of the year.

Joseph Supple, the Portland shipbuilder, says figures are being taken on a large number of barges and derrick scows for the sand and gravel companies of that city.

Humboldt county, Cal., has recently let contracts for a large amount of gravel for road work. The bids showed considerable variation, from 95c to \$1.35 per cubic yard.

PITTSBURGH SAND AND GRAVEL NEWS.

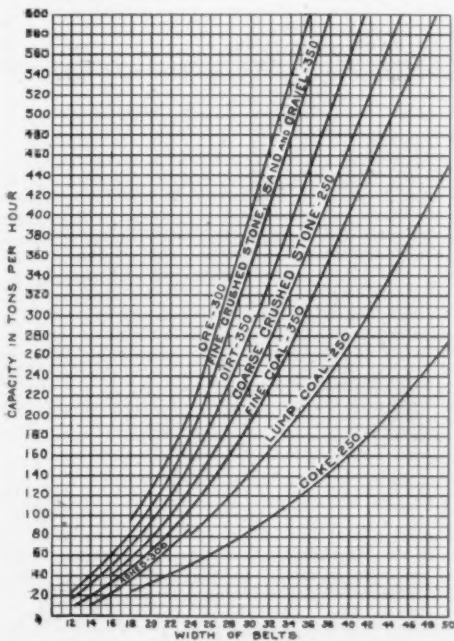
Pittsburgh, Pa., Nov. 17.—Sand men are more than usually busy for this season. This is due directly to the amount of street work going forward, such jobs as the Federal street raising and the improvement of West Carson street and South Eighteenth on the South Side taking enormous quantities of sand and gravel and ballast stone.

Prices received are low. Competition has been so close than many of the contracts awarded were taken at a fairly level profit. The glass sand business is improving steadily. The plate glass companies are working fairly well. All their plants but the window glass business is shot to pieces in all ways. Foundry sand is in better demand and a full average of sales is being made to the coal companies for their requirements.

The Winfield Sand Company reports some big contracts to have estimates and expects to see business very good this winter. Its plants in Butler county, Pennsylvania, are running full and the company is busy all around.

The Pittsburgh White Sand Company, which is affiliated with the Harbison-Walker Refractories Company in the Farmers' Bank building, reports no let-up in its business. Its plant at Mapleton, Pa., is running full. About half its output goes to glass companies and the remainder to coal companies and brick concerns.

The American Silica Sand Company has been organized by Albert P. Meyer of 1251 Frick building annex, and Howard C. Meyer and A. W. McCandless of Pittsburgh. Its operation will be near Huntingdon, Pa.



The Pennsylvania Glass Sand Company reports all its plants running full. These are located at Hancock, W. Va., Berkley Springs, W. Va., Mapleton, Pa., McVeytown, Pa., and Grandville, Pa. Its trade has been good all summer and now that plate glass companies are running full its shipments are increasing right along. Its officials also report quite an increase in inquiry from the steel mills.

The Rodgers Sand Company reports a very busy fall. All its diggers are working and it finds difficulty in getting enough teams for its jobs. The only complaint this concern has is in the matter of prices, which are low.

The McLean Brothers are digging a big lot of sand from the Monongahela river near Morgantown, W. Va. Clarence Peck and George Bennett of that city are also doing an excellent business, getting the sand from the river opposite Grandville.



STEEL BARGE OF RODGERS SAND COMPANY OF PITTSBURGH, PA.

The Pennsylvania Sand Company has been organized at New Castle, Pa., by L. M. and W. G. Ober, T. F. Moorehead and others of that city, and will have a large plant in that locality.

A fine deposit of building sand was accidentally discovered at Boardman and Hazel avenues, Youngstown, Ohio; by contractors excavating for the \$1,000,000 hotel there. One cement dealer of Youngstown has offered a dollar a load for all sand from this place.

The Iron City Sand Company is busy. It is working all its diggers and has more teams on the road than at any time this year. In addition to the big Federal street job on the North Side which it will complete before snow flies it has the contract for the South Eighteenth street improvement.

Large consignments of sand and gravel are being taken up the Monongahela to a point above Rices Landing, to be used in the building of the new coke ovens now being erected by the Crucible Steel Company.

John A. Guiler of Connellsville, Pa., is starting a big sand mining operation on the Burd farm near Kingston, Pa., and has already installed a carload of new machinery. It shipped twenty-five carloads of sand from the farm this month.

The Hamilton Molding Sand Company, capital \$3,000, has been formed at Hamilton, Ohio, by William B. Mayo, O. D. Dillman and others of that city.

The Juanita Sand Company, capital \$10,000, is a new concern at Sunbury, Pa., which is arranging to equip a large operation in that neighborhood.

EQUIPPING MODERN PLANT.

Lawrenceburg, Ky., Nov. 15.—The Kentucky River Stone & Sand Company has been organized in this city and is now equipping a modern plant preparatory to starting in business November 20 or thereabouts. The plant is located near the Tyrone depot of the Southern Railway in Kentucky, and possesses unsurpassed transportation facilities as well as being equipped for large capacity along the most approved lines. With offices in Lawrenceburg and works in Tyrone the company promises to do booming business. The officers of the new concern are as follows: Ernest W. Ripy, president; Robert Ripy, secretary-treasurer, and T. B. Ripy, general manager. The capitalization of the company is \$15,000.

Mackinaw Sand & Gravel Company, Lincoln, Ill., are going to make considerable improvements at their plant and expect to install revolving screens and a crusher. They are also in the market for a drag line. They are now using gravity screens which are giving very good satisfaction. They are pumping material from the water with an eight-inch pump, using 150 h. p. boiler and double engine.

Crystal Sand & Gravel Company, Inc., Battle Creek, Mich., are adding a screening and washing plant and crusher. They are going to manufacture concrete blocks and brick, especially a fine quality of face brick. Their sand is a superior quality of crystal sand.

BELT CONVEYOR

Data and Charts of Great Interest to Every User—An Easy and Accurate Method for Obtaining Capacities and Power Requirements.

By Raymond W. Dull.

There have been published numerous charts and tables for obtaining capacities and power requirements for belt conveyors, although only a few are based on results obtained from actual installations.

The accompanying charts give reliable information in a form readily understood, and quickly operated.

To ascertain proper size of conveyor belt, to use for a certain capacity, start at the left side of chart, at desired capacity, and follow in a horizontal direction, until the horizontal line intersects the curve of the material you wish to carry. From this junction point drop downward to bottom of chart, and you will find the size of belt to use.

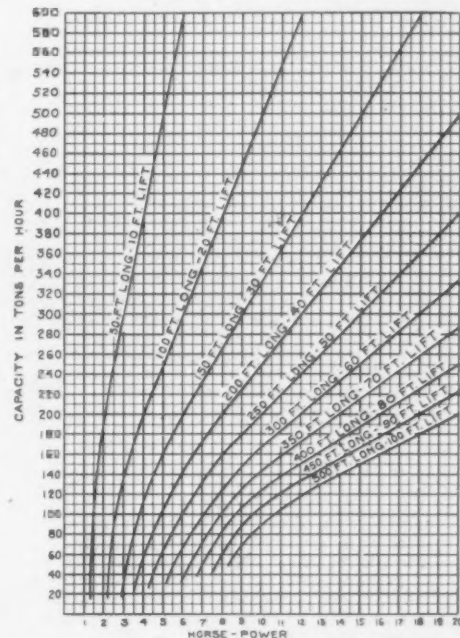
If you have the belt and wish to know how much material per hour you can carry, begin at the belt size at bottom of chart, and follow upward until the curve of material is intersected, then read the capacity at the left side of chart, horizontally opposite the intersection. The numbers on the curve represent the recommended speed for the belt, for the different materials.

The horsepower chart is the result of considerable compilation of data and careful study. In using this chart, begin as before, at the left side of chart, follow the horizontal line to the curve representing the length of conveyor, thence downward to the bottom where the horsepower is indicated. If the conveyor is inclined, follow this same horizontal line, to a curve which represents the height lifted, thence downward as before. The sum of these two results is the proper horsepower.

DETROIT SAND AND GRAVEL NEWS.

Detroit, Mich., Nov. 18.—Conditions in the Detroit sand and gravel market have improved somewhat during the past month. Dealers report a better demand for their products than was experienced a month, or, in fact, at this date a year ago. Local sand and gravel producers say this fall is not up to the standard, but as last fall was a poor one for business the improvement this year has been really welcome. Much of the sand and gravel used in Detroit is brought down by boat from the lake and river ports, and the indications are that the carrying season will go through later this year than usual. Last year the boats laid up before there was a coating of ice on the river; this year it is planned to equip some of the sandsuckers, as they are called, with ice breakers, so the carriers can get into the winding streams about Detroit after the sailing season has officially closed.

The usual price for gravel ranges between 85 cents and \$1 per cubic yard and 32 cents or 38 cents a cubic yard for sand. Prices have remained unchanged during the month.



OFFICIAL CALL FOR SAND AND GRAVEL PRODUCERS

Realizing the need for an organization among the producers of sand and gravel, the undersigned producers invite you to be present at the Auditorium hotel, December 15th and 16th for the purpose of forming a permanent National organization.

This meeting is to be preliminary in its nature, and plans and methods will be discussed for the formation of the organization, and a Constitution and By-Laws prepared. While the meeting at Chicago is to be held primarily for the accommodation of those producers who are nearest to this point, it is urged that all who can, attend this meeting.

In order to accommodate those producers who are nearest to New York, another meeting will be held at the Hotel Astor on January 31st, at the same time and place of the meeting of the National Builders' Supply Association, and during the Cement show at Madison Square Garden.

Especially interesting programs will be provided at each of these meetings with the idea of bringing out a discussion of the various problems confronting the industry.

We want your earnest and hearty coöperation in this movement, and respectfully invite you to attend either, or both of these sessions.

Please notify ROCK PRODUCTS, 537 So. Dearborn Street, Chicago, Ill., of your intention to be present at whichever meeting is most convenient for you to attend.

It seems hardly necessary to dwell upon the need for an organization among the sand and gravel producers, because it has long been evident that such an organization was a grave necessity, and there is no question but what conditions can be improved and bettered by such an organization.

We, the undersigned, have pledged our attendance and respectfully urge upon every producer of sand and gravel to make it his business to be present and lend his influence and support to the movement:

Mackinaw Sand & Gravel Co., Lincoln, Ill.

Star Sand Co., Portland, Ore.

Indiana Gravel Co., Indianapolis, Ind.

R. A. Carreker, Cook's Springs, Ala.

H. H. Halliday, Cairo, Ill.

Esston Sand & Gravel Co., Chicago, Ill.

Granite City Lime & Cement Co., Granite City, Ill.

Lincoln Sand & Gravel Co., Lincoln, Ill.

E. J. Reynolds & Co., Utica, Ill.

Utica Fire Sand Co., Utica, Ill.

Hoosier Slide Sand Co., Michigan City, Ind.

Fritz Jahncke, Inc., New Orleans, La.

Tioga Gravel Co., Ltd., Alexandria, La.

Munjoy Gravel Co., Portland, Me.

Dobbins Gravel & Coal Co., Denver, Colo.

Huron Shore Gravel Co., East Tawas, Mich.

Goodwin Sand & Gravel Co., New York City, N. Y.

Ohio Gravel & Sand Co., Columbus, Ohio.

Ohio Sand Co., Conneaut, Ohio.

The Crystal Sand & Gravel Co., Inc., Battle Creek, Mich.

Portage Silica Co., Youngstown, Ohio.

Columbia Silica Co., Portage, Wis.

E. A. Sherman, Stephens Point, Wis.

Waukesha Concrete Block & Material Co., Waukesha, Wis.

SAND AND GRAVEL DEALERS TO MEET

**Enthusiastic Response to Suggestion to Hold a Preliminary Meeting in Chicago
December 15th and 16th at the Auditorium Hotel.**

So many favorable responses have been received to our recent letters on the subject of an organization among the producers of sand and gravel, that it seems advisable to call a preliminary meeting on the 15th and 16th of December at the Auditorium Hotel in Chicago.

Practically every branch of the building material business is organized, with the exception of the sand and gravel business. So much has been written in the past on the subject of the benefits of organizations, that it seems almost superfluous at this time to dwell at any length upon the necessity or the value of such an organization. There have been many efforts in the past to get a National organization started, but the movement has never had the proper backing, and has always fallen through for one cause or another.

The growth of the sand and gravel industry has been one of the marvels of the past decade. No business has shown greater improvement in the last ten years than has the production of sand and gravel. Whereas the business in the past was conducted in a desultory manner and with very little capital invested, it is today a business representing millions of dollars of capital which is invested in equipment and machinery, which have brought the production of sand and gravel to a high state of perfection.

Some producers of sand and gravel along special lines, such as glass sand, foundry sand, etc., have conceived the idea that this organization is entirely for the producers of building sand and sand for construction work. Such is not the case. If the organization is to be a successful one, it must be founded on broad lines which will be comprehensive

enough to take in all of the various interests at one and the same time. Every producer of sand and gravel in this country today has interests in common, and the one parent organization can father organizations of special interests and local organizations which can meet more frequently. The right kind of an organization can prevent unreasonable competition and careless methods. The primary object of all organizations is education, and this is brought about by a free interchange of ideas and by listening to the experiences of others in the trade.

In discussing conditions in the sand and gravel business with the large producers we are led to believe that a National organization is an absolute necessity.

It has been decided, therefore, to hold a preliminary meeting at Chicago, December 15th and 16th, at the Auditorium Hotel. At this meeting a temporary organization can be formed and plans for a permanent organization looking toward two meetings a year, one in the West and one in the East, can be discussed.

It is our idea that as many of the Western men as possible go East and attend another meeting at the Hotel Astor, New York City, on January 31st. At this time the meeting of the National Builders' Supply Association and the New York Cement Show will be going on, and no doubt a large attendance can be secured from among the eastern sand and gravel producers.

By the way, Rock Products will print a daily at the show and cover these conventions every day.

Some of our friends who are retailers of builders' supplies are also in the sand and gravel busi-

ness. We are in receipt of a letter from a prominent firm in Birmingham, who is in this class, and who say they would like to make one trip and cover both meetings at the same time. No doubt there are others, who would like to do the same thing and for that reason we deem it advisable to hold two meetings, one within a month of the other.

A program which will take up subjects of special interest to the sand and gravel producers will be arranged for the Chicago meeting.

A similar interesting program will be arranged for the New York meeting incorporating some of the suggestions brought out in the discussions at the Chicago meeting.

We believe, along with many of the prominent producers with whom we have discussed the matter, that these two meetings conducted during the dull season will be responsible for much more intelligent coöperative effort and greater profits in the sand and gravel business in the year 1912.

Two prominent features of the coming meetings will be: First, the amalgamation of the special interests such as the producers of glass sand, molding sand, etc., or in other words to have organizations of special interests within the parent association.

Second, to promote local organizations wherever none now exist and assist those who are now working out their local problems by meeting at least once a month.

These meetings are a strictly business proposition, which you must figure on just the same as you would the purchase of new equipment or machinery, and should have your immediate consideration.

[Continued on Page 45.]

"Security" Portland Cement

(Every Barrel Guaranteed)

Means permanence and reliability to the architect, engineer and contractor.

Berkeley Hydrated Lime

Added to Concrete insures waterproof and vermin proof work.

"ALCA" LIME

(TRADE MARK)

Combines all the good qualities of old fashioned Lime Mortar with quick hardening qualities of Patent Plasters. It fills the long felt want.

Cement and Lime literature FREE.

SECURITY CEMENT AND LIME CO.



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Strength—everlasting strength is the conspicuous characteristic of concrete made from Universal Portland Cement. Universal is made by correct methods, under the most exacting supervision, from the purest raw materials combined in proportions which are definitely the right proportions.

Universal Portland Cement Co.
Chicago — Pittsburg

Annual Output 12,000,000 Barrels



SALES OFFICE:
Liggett Bldg., St. Louis.



SALES OFFICE:
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THE Standard Brands

OF
PORTLAND CEMENT
Lightest in Color
Highest Tensile Strength

ALWAYS UNIFORM

Always the same high quality. Prompt shipment guaranteed and made possible, as each mill is located within switching limits of the two greatest railroad centers of the West. You are assured of your orders being promptly filled.

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An Extra Heavy, Extra Strong
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"CHICAGO AA" PORTLAND CEMENT



**"THE BEST
THAT CAN BE MADE"**

SOLD BY ALL REPRESENTATIVE DEALERS

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Saylor's Portland Cement

Oldest American Portland
Used by the United States Government since 1876

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WHITEHALL PORTLAND CEMENT

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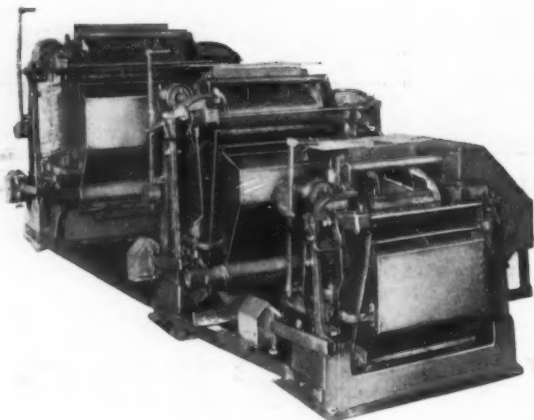
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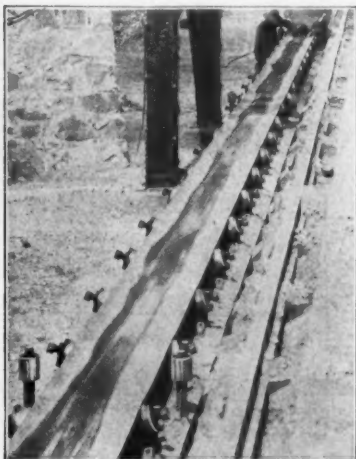
136-138-140 Commerce Street, NEWARK, N.J.

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The Profits in Washed Gravel



depend upon the cost of operating the plant and upon the quality of the gravel produced.

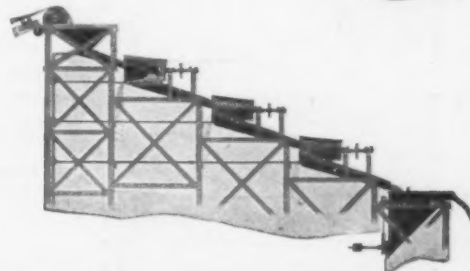


"S-A" Belt Conveyor Under Load

"S-A" Gravel Washing and Screening Plants

are designed to produce clean gravel at the lowest possible cost. The simplicity of our system and the success of the hundreds of plants, which we have erected throughout the country, back up every claim which we may make.

Through our engineering department, we are able to submit designs for a plant suited to any local requirements. Let us study your proposition. Our experience will prove valuable to you.



"S-A" Gravel Washing System

Gravel is delivered by an "S-A" Belt Conveyor to a series of three Improved Gilbert Screens. As these screens separate the various sizes of gravel, a stream of water is directed against the material. The rolling and tumbling in the stream of water produces a product that will pass the most exacting specifications. The settling tank delivers a constant stream of clean sand from the lower gate.

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Demand Low Magnesia

In the last analysis, it is only the low-magnesia Portland Cement which may be adjudged safe for permanent concrete work. Chemistry warns you that "magnesia is almost insoluble in water." This fact is not always given that serious degree of consideration which it deserves. The standard Specifications are known to be lax in this particular; but this is no valid excuse for those charged with determining the brand to be used in a particular case. Why accept 4%—magnesia cement when you can get Superior with less than 1%? Then Superior's dust-like fineness gives it a further claim on your judgment. It's a true Portland Cement which will endure for ages. Ask for our Free Literature, which will post you on many vital points usually glossed over with an object.

Union Trust Bldg., Cincinnati, Ohio.

JUSTUS COLLINS, President

The Superior Portland Cement Co.

OTTAWA SILICA CO. Ottawa, Ill.

Washed-Steam Dried and Screened

White Sand

Unexcelled for

- Facing Concrete Blocks
- Ornamental Concrete Stone
- White Plaster
- Roofing
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- Sawing Stone and Marble, Etc.

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Shipped in Paper Lined Box
Cars or in 175-lb. Bags.

You can order less than a carload, in fact shipments as small as five 175 lb. bags can be delivered economically.

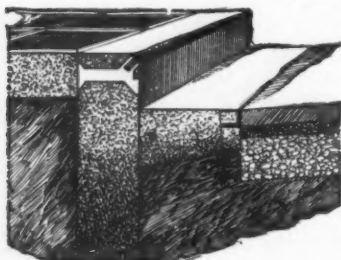
LARGEST SHIPPERS OF WHITE SAND IN THE UNITED STATES

Tell 'em you saw it in ROCK PRODUCTS

WAINWRIGHT GALVANIZED STEEL CORNER BAR

FOR PROTECTING EDGES OF CONCRETE CURBS, STEPS, COLUMNS, ETC.

"WAINWRIGHT PATENTS"
March 9, 1897
November 22, 1898
May 5, 1903
March 26, 1907
August 29, 1907
August 2, 1910



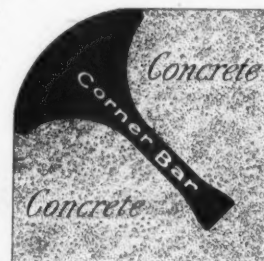
This bar is SELF ANCHORING, the DOVETAILED WEB holding it firmly in place EVERY INCH OF ITS LENGTH, requiring no clips, bolts or wires at intervals, allowing buckling or expansion, causing loosening of curved plates or other devices, which form no permanent protection to the Curb. This bar presents a RESISTING DEPTH of nearly AN INCH OF SOLID STEEL, at any possible point of impact, as compared with other devices using seldom more than one-eighth of an inch of resisting surface.

It has a record of ten years' use without failure when laid in accordance with our printed directions, which will be sent to any engineer or contractor who desires them.

This bar has been in public use for more than ten years as the main feature of the

WAINWRIGHT STEEL-BOUND CONCRETE CURB

ABSOLUTELY NON-BREAKABLE
CHEAPER THAN GRANITE



GALVANIZED STEEL CORNER BAR
prevents Chipping or Breaking on Edges

MECHANICALLY PERFECT AND
UNEQUALLED FOR CURVED CORNERS

THE BEST IN THE WORLD OVER THREE MILLION FEET IN USE IN MORE THAN
THREE HUNDRED CITIES IN THE UNITED STATES

**THIS CURB WILL STAND HARDER USE AND LAST TEN
TIMES AS LONG AS PLAIN CONCRETE CURBING**


CONTRACTORS can make money by laying this curb.

CITY ENGINEERS can save money by specifying it.

ARCHITECTS are invited to read pages 242 and 243 "Sweet's Index."

METAL PARTS FOR SALE. Send for Copyrighted Booklet No. 13.

STEEL PROTECTED CONCRETE CO., Real Estate Trust Bldg. Philadelphia, Pa.



THE FISHACK GYPSUM COMPANY
General Office, TOLEDO, OHIO
Manufacturers of a Complete Line of
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"WRITE FOR OUR DESCRIPTIVE BOOKLET AND PRICES"

"STAG" BRAND

MANGANESE STEEL

Wearing Parts for all Crushers

JAW, CHEEK AND TOGGLE PLATES

SOLID AND MANTLE HEADS

FOR ALL SIZES OF GYRATORY CRUSHERS

SPUR AND BEVEL GEARING—LONG WEAR AND NO BREAKAGE
FOR CEMENT MILLS AND GYRATORY CRUSHERS

RENEWABLE POINT DIPPER TEETH (Pat'd)

REVOLVING SCREENS

EDGAR ALLEN AMERICAN MANGANESE STEEL CO.

Works—Chicago Heights, Ill.; New Castle, Del.
General Office—McCormick Building, Chicago, Ill.
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PERMANENT and THOROUGH
Water-proofing of Cement Work
results from the use of

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The Maumee Chemical Co.
403 ST. CLAIR BUILDING
TOLEDO, O.

TRADE MARK.

Tell 'em you saw it in ROCK PRODUCTS

SAND AND GRAVEL DEALERS TO MEET.

[Continued from Page 40.]

Your attendance and your agreement to be a member of this proposed association, formed on economical lines, but which will be strong enough to combat existing abuses and result in closer friendship and increased profits, is essential.

A great many of the letters which we have received on the subject merely signify willingness to attend a meeting and point out the necessity for cooperation among the sand and gravel interests, and a willingness to lend their assistance to the formation of an association. In some of our communications, however, on the subject, there are points brought out which it would be well to present here at this time.

We quote from a letter received from the Lincoln Sand & Gravel Co., Lincoln, Ill., which says:

We heartily indorse what you say in Rock Products in regard to organizations, and believe that it would be beneficial to the sand and gravel interests to have both national and state organizations, and will say that you may use our name as one of the signers of the call for the meeting to be held Friday, December 15th, at the Auditorium hotel, Chicago, trusting this may develop into something definite.

The Mackinaw Sand & Gravel Co., of Lincoln, Ill., write as follows:

In the September issue of your valuable journal I noticed the following editorial: "Organization for the purpose of stifling competition are worse than none at all. Meet competition with a smile—talk it over—get together. Instead of fighting against one another, fight for one another. This is the kind of co-operation which succeeds."

This editorial rings true and its effect upon me has been to stimulate in me a desire to see the sand and gravel operators of this section of the country organize for mutual benefit. The idea of such an organization has been in my mind for some time, and I have gone so far as to bring the matter before a number of gravel men in the past few weeks. I have found none who is not interested in the movement and all that is necessary, it seems, is to issue a call for such a meeting.

It should be a comparatively easy matter to perfect this kind of an organization. Its purpose should be to foster the feeling of cooperation between the sand and gravel men. The result of periodic meetings of such an organization would be to elevate the industry to the top notch of efficiency and economy, for the exchange of ideas and experiences are the best means toward perfection. The natural effect would be the production of a better grade of material and more uniform and better prices for our product.

Such an organization should be large enough to embrace the leading operators in this section of the country. I believe that an organization composed of the operators of Illinois and western Indiana would make a good nucleus to begin with. I would appreciate it if you would give this matter a little publicity in your columns so that other sand and gravel men will give expression to their opinion on this matter. If the sentiment is favorable, a call for such a meeting could be issued this winter and the organization could be perfected.

Thanking you in advance for the courtesy of suggesting this matter in your columns, I beg to remain,

The Indiana Gravel Co., of Indianapolis, Ind., write:

We wish to indorse your suggestion for a meeting of the sand and gravel men at the Auditorium hotel, Chicago, Illinois, December 15th. We believe that a movement of this kind will be beneficial.

Showing that the interest has extended even as far as the west coast, we quote the following from a letter from the Star Sand & Gravel Co., Portland, Ore.:

C. Minsinger, president of the Star Sand & Gravel Co., will be in the east about the time this meeting is on and he will attend at the Auditorium hotel, December 15th.

R. A. Carreker, of Cook's Springs, Ala., says:

I think it would be a good idea to have a national organization of the sand and gravel producers. I have been thinking for some time that if we would come together and have a better understanding, instead of cutting prices in favor of the consumer, it would be for the best interests of the trade.

The Hoosier Slide Sand Co., Michigan City, Ind., says:

We heartily indorse your proposition of forming a national organization of sand and gravel dealers. As to the time and place of holding the first meeting, your suggestion, the Auditorium hotel on December 15th is entirely satisfactory to us.

Fritz Jahneke, Inc., of New Orleans, La., says:

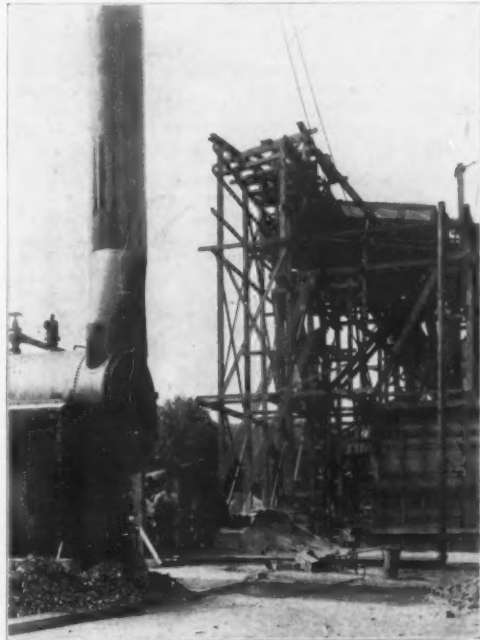
We would suggest that instead of having it in December, to have it the early part of January, say a day or two prior to the Cement show in New York; that is, to allow the different interests to go to Chicago and attend the meeting there and then go and attend the National Builders' Supply Association and the Cement show. Of course, this is only a suggestion. We think the movement a very good one and if we can help you in any way, do not hesitate to call on us.

The Tioga Gravel Co., Ltd., of Alexandria, La., say:

We are in favor of the national organization to meet at least once a year. We will certainly be glad to allow our name to be used as one of the signers of the call.

The Munjoy Gravel Co., of Portland, Me., say:

In regard to an organization of the sand and gravel interests in this country, I would say that we are highly



400 H. P. STEAM PLANT WITH ROPE DRIVE TO GRAVEL WASHERY.

in favor of something of this kind and would do our part towards starting such an organization and keeping it up after it was started.

Bedford & Nugent, of Evansville, Ind., say:

We expect one of the firm to be in Chicago to attend the meeting December 15th.

The Goodwin Sand & Gravel Co., 71 Broadway, New York City, N. Y., write the following encouraging letter:

We note your inclination to take the lead with a view of organizing the sand and gravel interests of this country. We think your move is a good one, and the date of December 15th is all right, and if you carry your plans to completion we see no reason why a representative from this company cannot be present.

The Ohio Sand Co., of Conneaut, Ohio, say:

We are pleased to advise that we heartily approve of the plan outlined therein, and believe it will be productive of much good.

The Columbia Silica Co., of Portage, Wis., say:

We are thoroughly in accordance with your statements and believe that much good might come from an organization of this kind, especially so if properly handled. Regarding the time and place of the meeting, it is immaterial to us. If it were held in Chicago, we would make an effort to be present at any time, providing we had a few days' notice.

The Waukesha Concrete Block & Material Co., of Waukesha, Wis., say:

Your suggestion for a meeting of the gravel producers at the Auditorium on December 15th will meet with our hearty cooperation.

The Wausau Quartz Co., of Wausau, Wis., say:

Our sand is used for different purposes than the product of the ordinary sand and gravel concerns, but we might be interested in an organization such as you contemplate, and therefore the writer will try and arrange to be in Chicago on December 15th.

Jos. Dobbins, president and treasurer of the Dobbins Gravel & Coal Co., Denver, Colo., says:

I am very strongly in favor of such an organization, and herewith authorize you to use my name as a signer of the call. I am very much interested in the production of sand and gravel in Denver, having spent almost three years at hard labor, besides a large amount of money for fitting up a plant for excavating sand and gravel. As the biggest operator in Denver, I have tried at different times to get the producers here to form an organization. The consumers of these materials do not of course favor the same, but they do not realize the time and money spent to get the gravel and sand in proper condition for the concrete.

I have the best washing plant in Denver; I have an excavator of my own invention to excavate same, and it is a big success and inexpensive in operation. I would like very much to be present at your first meeting.

About sixty responses have been received to our two letters suggesting the meeting. All are more or less enthusiastic, and there is every indication that there will be a large attendance at the first session.

J. F. Bellman was awarded a contract at Lawrenceburg, Ind., to construct a gravel road in Manchester township for \$19,796.

NOVEL SAND AND GRAVEL PLANT.

[Continued from Page 3.]

power steam engine with boiler. The ropes are guided over idlers for fair lead to the driven sleeve on a jack line from which distribution is made to conveyors, screens, crusher, etc. Water for the washery is delivered by a triplex pump, with steam engine and boiler in a pump house at the creek passing the plant. By side bin gates at the sand house, and double undercut gates beneath the washery, the materials are roped into dump cars for hauling by steam locomotives to the shipping dock, whence scow loads are towed to contractors or dealers. Aside from this, the stationary plant, the company's equipment includes four 12-ton steam locomotives, two steam shovels, twenty-five dump cars, eighteen scows and one large towing tug.

As stated in the first part of the article, the machinery of the Webster Manufacturing Company, of Tiffin, Ohio, and their methods applied have proven satisfactory. The new Webster installation was rushed to completion after being started in June, this year, and was finished in time to make deliveries on the new navy yard job in Brooklyn. The showing made by the sand and gravel plant was the means of securing the contract for the entire requirements of the high-pressure tube work on the new Hudson river aqueduct.

All the equipment of the new washery, together with conveyors, transmission machinery, etc., was furnished by the Webster Manufacturing Company, through the New York engineering and sales office.



STEAM SHOVEL LOADING DUMP CARS IN THE BANK.



LOOKING TOWARDS THE PLANT FROM THE BANK.

HANDLING SAND BY ELECTRICITY.

The reduction of cost of handling his stock is the first and last word with the sand and gravel producer, if he is to conduct his business upon the highest possible scale of efficiency and consequently raise his standard of profit to the maximum. The stock in trade of the dealer is furnished by nature from river beds and sand pits. The cost of conveying it to the distributing point is pretty well defined in these days of railroad rate regulation, and he can figure accurately from year to year just what it costs him to transport his product by rail or float from the production point to the selling station. This feature averages down reliably to the cost per ton.

When the stock is in the yard, however, varying items of expense arise, and if the merchant does not exercise a deal of circumspection he will find that needless outlays have cut his profits to a minimum, putting him in the position of a man who is in business for the fun of it. The idea is to establish a system of handling which is as economical as it is possible to develop.

Naturally, in the average plant there is a lot of re-arrangement and possibly the installation of new equipment necessary to commencing scientific management policies. But the trouble and expense involved in such a procedure are eminently justified, as the experience of a prominent sand and gravel firm in Louisville, Ky., goes to show.

The E. T. Slider Company, at Campbell and Fulton streets on the river front in the Gateway City, is now running upon a re-organized basis one of the best-equipped handling plants in the country. The prime factor in the Slider management is exact methods, in line with modern business ideas which are cutting out unnecessary motions, waste labor and power and subsequent useless expense in every line of business. In this regard, the plant was recently equipped with electric power and the most approved methods of direct conveyors to further the up-to-date scheme.

Located as it is on the river front, the Slider sand and gravel distributing station gets its stock by water, in big barges which are moored at the company's float for unloading. The process of handling involves but one complete operation, the result being that sand and gravel is drawn directly from the barges into storage bins, from which it may be distributed in wagon-loads through separate chutes. The advantages of this scheme are legion and self-apparent. Often the dealer is compelled to unload his material by hand from the barges, convey it by wagon, belt-conveyor or even wheelbarrows to badly-appointed places of storage, and lose considerable stock in handling in addition to in-

curring the numerous incidental and useless expenses involved in the series of operations.

From the wharf belonging to the company an incline plane about 150 feet in length extends to the storage elevator, and two big cars oscillate on the tramway between the barges and the bins. The grade is a stiff one, about 32 per cent, but the heavily-laden vehicles ascend smoothly and without a hitch. Each car weighs two tons, and has the capacity of five tons of gravel, making the aggregate load seven tons.

On a level with the storage elevator there is the power-house, supplied with current from one of the public service corporations of Louisville. The house is equipped with a 112 horse-power alternating current motor of the wound rotor type, equipped completely with controlling and reversing apparatus, for the purpose of drawing the cars up the incline, depositing them at designated bins and allowing them to descend easily to the barges to be laden from the hopper which is filled direct from the transports by an electrically-operated shovel. The entire scheme is outlined as follows: Barge to digger, digger to hopper, hopper to cars and cars to the storage bins. But such quantities are transferred singly in direct line, without loss of time or power, that the operation is practically one. As soon as one of the pair of cars ascends to the top, the other container is at the bottom ready to be filled, maintaining a continuous chain of unloading until each barge is empty.

"Our electric plan of handling sand and gravel has been installed but a short time," said Manager P. C. Donaldson, of the Slider company, to a representative of ROCK PRODUCTS. "It has already proved to be vastly more efficient and economical than steam or any other power plan, but inasmuch as the system is comparatively new I would not like to commit myself to the extent of drawing a comparison as to the saving effected. It is certain, however, that the plan cuts down handling expenses considerably and that is the goal of every sand and gravel dealer."

NEW YORK SAND AND GRAVEL NEWS.

New York, N. Y., Nov. 17.—The demand for sand and gravel was very good in the local market during the past four weeks. Dealers are receiving a large number of inquiries and report that they will be kept busy delivering sand and gravel during the balance of the year. There was a stiffening up in the price of sand during the interval. The fall business which was tardy early in the season has begun to materialize now. Sand and gravel men look for a heavy demand for their materials when work has further progressed on the subways and the Catskill deep water pressure tube.

Charles A. Fox, general manager of the Phoenix Sand & Gravel Company, made the following remarks concerning the sand and gravel market: "The demand for sand and gravel was good during the past month and there is every prospect of a good business during the balance of the year. The fall season, as a rule, is our busy one, and the present season has not been an exception to this. There are quite a few big jobs projected in this city where sand and gravel will be used in large quantities, and we look for heavy business next spring."

W. J. Timberman, general manager of the Goodwin Sand & Gravel Company, had the following to say regarding the sand and gravel trades: "There has not been any improvement noted in the local demand for sand and gravel during the past month, and on the whole business was dull. There has been a firmer tendency in the market for sand and an advance of five cents was made, and it is now quoted at 30 cents per cubic yard alongside. However, the advance was not brought about by the improved demand, but on account of the present unfavorable conditions, the volume of business being so small that we were compelled to advance prices. Business, however, is bound to improve in the early spring, as very little sand and gravel have been used in the construction of the subways and the deep water pressure tube, which is to supply water from the Aqueduct to the five boroughs of New York city. These projects will require an enormous amount of sand and gravel."

Joseph N. Ely, of the Crescent Sand & Gravel Company, speaking of conditions in the local sand and gravel trade, stated: "We have experienced a very good demand for sand and gravel during the past four weeks. We have received a large number of orders during the interval and have delivered more sand and gravel during the past month than ever before. One

BIRMINGHAM SAND AND GRAVEL NEWS.

Birmingham, Ala., Nov. 16.—While dissatisfaction has been expressed about strictly local conditions in the sand and gravel line, general conditions throughout the Birmingham district, which in this sense includes all of northern Alabama, have been better than usual during the past sixty or ninety days and some developments have been noted, while several new concerns, at different points, are displaying interest in the distributing market which the Magic City, as Birmingham is now almost universally called, affords.

A new company in the sand trade, known as Camp & Farmer, has practically completed its preliminary developments near Prattville Junction, Ala., and the installation of a pumping plant in the Alabama river is so near completion orders are being taken for early delivery. The plant installed by Camp & Farmer cost about \$2,000 it is estimated, not including several barges which have been leased to handle their uptake. This new firm is composed of two men well known to the building trades, J. T. Camp, the senior member of the firm, being heavily engaged in the transfer, storage and wagon business in Birmingham, being sales agent for the Troy wagons. Mr. Camp is a man whose commercial rating is given at a very high figure.

Mr. Farmer has been operating a moulding sand pit at Grace's Cut, near Birmingham, for a number of years, and has built up an increasing business due both to the quality of the sand sold by him and to the business sagacity which he has displayed in the selling. This plant will continue in full operation and the same agencies for the sale of the moulding sand will be utilized to dispose of the output of the Prattville Junction sand, from which both coarse and fine grades will be produced.

The Savage Sand Company, in which Edward Hiller, president of the Jefferson Brick Supply Company is largely interested, has lately installed additional equipment in its pits at Elmore, a few miles from Birmingham, both for surface and drift workings, in anticipation of a heavy increase in the demand for the coming spring. The output of the Savage Sand Company is controlled by the Jefferson Brick Supply Company and this latter concern, as sales agents, competes very strongly for a full share of both sand and gravel business originating in this district. The contract for all sand used in the new Y. W. C. A., which is being built by Ager & Cline, contractors, of this city, of reinforced concrete and stone, was secured by the Jefferson Brick Supply Company, as has been the case in a number of other fair-sized contracts in Birmingham proper during the past year.

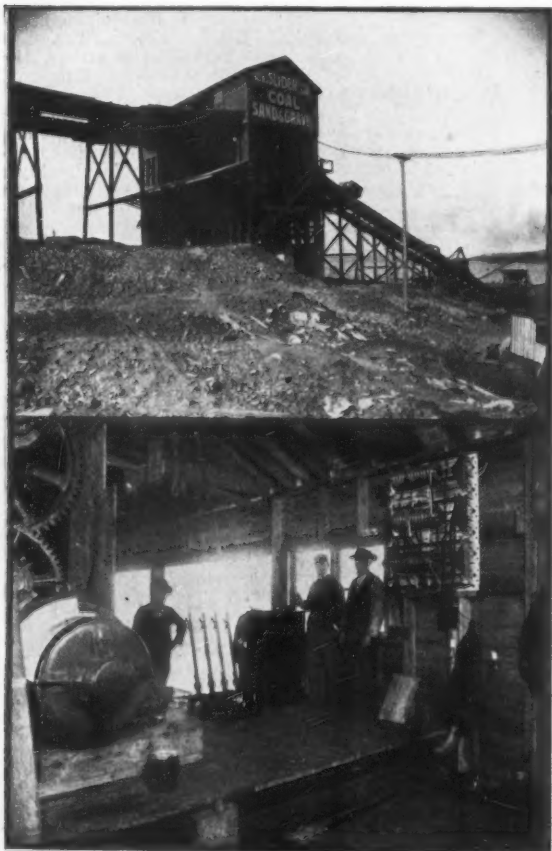
The Norwood-Boyles Lumber Company, a new company recently organized in East Birmingham by Harry Speaker, E. D. Speaker, A. G. Bates, H. J. Schwab, G. W. Yancey and C. E. Cole, with a capitalization of \$10,000, will handle not only sand and gravel, but cement and plaster as well, as the firm, already in active operations, will deal in building materials of all kinds on a large scale. Harry A. Speaker is president of the Norwood-Boyles Co., with his brother, E. D. Speaker, secretary, and they are the only two of those interested who will take active parts in the business, but experienced and capable men have been retained at the head of each department and the effectiveness of its organization has already been felt by some of the older firms in Birmingham.

The Empire Sand & Supply Company, with offices in this city and plant at Prattville Junction, is selling the Norwood-Boyles Company some of its sand and gravel, but other arrangements are being planned to take care of a larger demand than was anticipated in these lines.

Perhaps the most optimistic element in the Birmingham trade is the Fulenwider Building Material Company, which has been handling sand and gravel locally for a number of years. Robert Fulenwider, president of the company, announced a few days ago that plans were being made by himself and associates to begin the development of some dry workings in Marion county, about thirty miles from Birmingham, upon which satisfactory options had been secured. This bed, or series of beds, as it is reported to be, are in the Rossland tract, which is being developed by the Rossland Development Co. and consists of some very rich and deep deposits of a fine white sand, thought to be of the proper quality for plate glass.

R. M. Hoyt and J. L. Johnson, Jr., are the proprietors of the Nick-A-Jack Sand Company, which was recently incorporated at Rome, Ga., with an authorized capitalization of \$10,000, one-fifth of which was paid in. The company was organized to quarry and dig sand, gravel and stone and manufacture products therefrom.

The Board of Public Works of Antigo, Wis., has purchased twenty-three carloads of crushed stone from firms at Oshkosh, Kaukauna and Duck Creek for use in paving work.



E. T. SLIDER CO.'S SAND PLANT, LOUISVILLE.

Concrete

National Association of Cement Users

Meets Annually.

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Richard L. Humphrey, Philadelphia, President
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 H. S. Doyle, Chicago—Exhibition.
 W. H. Ham, Boston, Mass.—Insurance.
 A. E. Lindau, St. Louis, Mo.—Reinforced Concrete Building By-Laws.
 C. W. Boynton, Chicago—Roadway, Sidewalks and Floors.
 L. C. Wason, Boston—Treatment of Concrete Surfaces.
 R. P. Miller, New York—Fire-proofing.
 Robert A. Cummings, Pittsburg, Pa.—Measuring Concrete.
 Peter Gillespie, Toronto, Canada—Nomenclature.
 Sanford E. Thompson, Newton Highlands, Mass.—Specifications and Methods of Tests for Concrete Materials.
 Logan Waller Page, Washington D. C.—Education.

Remember the dates of the three great cement shows:

New York—Madison Square Garden, January 29-February 3, 1912.

Chicago—Coliseum, February 21-28, 1912.

Kansas City—Convention Hall, March 14-21, 1912.

THE THREE CEMENT SHOWS.

For fear that some of our many readers are not well acquainted with the dates of the three cement shows we give them here again. They are: New York, Madison Square Garden, January 29-February 3; Chicago, Coliseum, February 21-28; Kansas City, Convention Hall, March 14-21. These shows are of so much importance to the industry in all its branches, in that they accomplish so much that not one of the many thousands interested in the cement business should think of missing them.

The production and consumption of Portland cement in the United States and the general adoption of concrete in all kinds of construction work has developed with more wonderful rapidity probably than any industry in the history of the world. Discerning American architects and builders have been prompt to perceive the superior and lasting qualities of concrete as compared with any other building material on the market at the present time. It is so obviously evident that concrete is the best and most practical in every way that the attention of the building world is irresistibly drawn to the use of this material. The discovery of the advantages of concrete at a time when the conservation movement was formed, when the constantly diminishing supply of lumber and its ever increasing cost became vital factors in building operations, gave still greater impetus and attached still greater importance to the new material of construction. This first little headway that was early made by concrete was only the first step toward the ultimate goal, when everything that spoke of architectural construction was sure to be of "the everlasting stone."

The cement shows are the great markets where the knowledge of engineers, architects and builders is distributed to the general public. Here the farmers, the city man who is thinking of building a house, the suburbanite who has a little money to invest, and many others, are in the right mind to have the advantages of concrete explained to them and they go away from the show with the firm and ever-increasing belief that concrete is the coming material. Soon they begin to wonder if it has not already arrived. Everywhere they see evidences of the great strides this material is making. When they go to the office in the morning they see men paving the streets, other men building houses and warehouses and still other men who are perhaps engaged in constructing a giant bridge—and all the material that is being used is concrete. These are the things that count—get your product before the man who buys and the future of your business is assured, especially since your product is being boosted on every side and by every dealer.

Perhaps the most important of all conditions which have brought concrete so easily and conspicuously to the front, however, is the most powerful influence of the time, money and intelligent effort that has been spent by the interests concerned in the advancement of concrete construction, for the education not only of the building profession, but also of the general public. The following is quoted from Printer's Ink: "The relation of the cement industry to advertising has been most pronounced from the very beginning. The same alert and generally educational efforts have been made by the cement industry that so successfully put the automobile business on its feet. The same highly successful exhibits with high grade accompanying display advertising are held and the same careful study of the market is made. Hundreds of industries have as much legitimate basis for more widespread use as cement has but they have not realized the vital factor of putting this basis forward in the consciousness of the public."

These shows are practical and their exhibits are practical. The men are there to please the public and they are going to do it at any cost, as it is on the public that they will have to rely for their business. It is not a question of education, but just a problem of getting the people interested in a material that is new and that, although it has been tried in thousands of successful cases, must work its way up by degrees.

The interest aroused in the past cement shows has been very gratifying to all concerned and it is evident that this year there will be record breaking attendances at all of the shows and with more perfect facilities for keeping the crowd's interest in hand and with elaborate preparations for entertainment it is not only possible but very probable that the three shows will "start something" that will not die out and that will last for all time in the minds of the people. Tens of thousands of people who were attracted to the cement shows last year departed with profound impressions of the value of concrete and in many cases with a firm resolution to adopt it at the earliest opportunity. It is a fact that the public display of products is a factor of prime importance in the marketing of goods and in the commercial and industrial development of any business.

It is the purpose of the cement shows to unite the allied industries for the advancement of concrete along broad publicity and educational lines, and to serve the direct commercial interests of the exhibitors individually. The cement shows bring into personal touch the architect, the contractor, the builder and the owner with the things in which the exhibitor wants to interest these people. It is the object of the shows to display before the people all of the materials, appliances and machinery employed in the use of concrete; thus to demonstrate the substantial character of the industry and the magnitude of its extent and ramifications; to convey to the public mind persuasive evidence of the durability, sanitary and economical advantages of cement construction.

One need only to look back over the records of the past shows, to study the results as evidenced by the increased and steadily increasing use of concrete to know that the shows have been successful and that there are more chances this year for success than there were in former years, when the industry was not as firm in the minds of builders as it should have been. There is no reason why the three shows this year should not astonish even the managers who are of the belief that they will totally eclipse all former efforts.

MEET DECEMBER FIFTH.

The Northwestern Cement Products Association will hold an executive meeting December 5, at which time the question of holding a show in connection with the coming convention will be taken up. From present indications there will be no show, as the majority of replies received to a recent letter inviting exhibitors to signify their willingness to make an exhibition, have met with but faint response.

The Waterproof Pressed Stone Company, of Greenwood-Altoona, Pa., will add a concrete brick department in the spring. They are in the market for fast brick machinery. They say, "We make our products on the money-back system, and that alone will give you an idea of where we stand on the proposition, and if your paper stands for the same thing you deserve success."

O. L. Miller & Company, Indianapolis, Ind., who are manufacturers of artificial stone and retailers of builders' supplies, are building a new factory 44'x110', steam heat, electric power, etc. They are going to install a crusher, mixer and cars, and are in the market for crushed granite.

IOWA'S EIGHTH ANNUAL.

The eighth annual show and convention of the Iowa Association of Cement Users will be held at Sioux City, Iowa, January 10-12. The main floor of the Sioux City Auditorium, Seventh and Douglas streets, including the stage and large foyer, will be used for the exhibits. Each year's event has shown a splendid growth over the previous year, and from preparations made for this, the eighth show, it would seem that all the others are to be eclipsed. For any further information address Ira A. Williams, secretary, Ames, Iowa.

OIL-CONCRETE ROADS.

The following is taken from the address of the Secretary of Agriculture at the first American road congress of the American Association for Highway Improvement, Richmond, Va., November 20:

"An important feature of the investigative work conducted by the office of public roads is the discovery and development by Mr. L. W. Page, director of that office, of the preparation and uses of a combination of oil and cement concrete. Cement concrete has not only become a universal structural material, but its use in road building and all forms of engineering construction is increasing rapidly. The principal objection to the ordinary cement-concrete lies in the fact that it is extremely porous and absorbs water. In the course of experiments Mr. Page discovered that it was possible to mingle oils with wet cement. The mixing presents no difficulties whatever and the advantages of the new material are that it is much more dense than ordinary concrete and is entirely water proof, while it develops an ultimate strength about equal to the ordinary concrete mixture."

ESTIMATES ON STANDPIPES AND TANKS.

The Aberthaw Construction Company, of Boston, who have erected standpipes at Attleboro, Mass., and Westerly, R. I., have made some interesting estimates as to the cost of certain standpipes and tanks, as below:

	Dia.	Ht.	Cost.	Cost.	Remarks.
Waltham	100	43	\$23,786	\$12,90	Roof steel trusses, concrete slab, central pier.
*Attleboro	50	100	36,000	24.50	
Manchester, Mass.	80	72	36,000	25.00	
Lester	80	30	12,382	11.00	No roof.
*Westerly, R. I.	40	70	16,000	24.30	
Warren, R. I.	40	50	10,591	22.50	
Parla, Me.	80	14	7,150	13.00	No roof.
Gilbert & Bennett	30	70	9,000	24.30	
Gilbert & Bennett	30	30	8,000	50.00	On tower 40 ft. high.
Douglass	46	20	5,200	21.15	
Burlington, Vt.	30	30	5,050	31.40	On tower 25 ft. high.
Vineyard Haven	20	70	6,000	36.60	
Walker & Pratt	55	20	3,275	22.75	
Littleton, N. H.	27	27	2,080	10.10	
Danbury	20	30	7,250	103.00	On tower 25 ft. high.
Medford, Mass.	20	23	1,530	27.80	
Medford, Mass.	20	20	1,400	29.20	
Littleton, N. H.	17	17	1,080	38.60	
Fall River	16	15	850	38.60	
Madison, N. J.	25	130	10,000	33.40	Around old steel pipe 75 ft. high. Top part a separate tank.

*Constructed by Aberthaw Construction Co.

A CORRECTION.

In our issue of October 22 on page 39 was an article on "Government Experiments in Road Building." A very important line was left out. This was the line referring to the oil of the American Asphalt and Rubber Company being used in the experiments of the government. The paragraph should have read: "The preparations to be used are Tarvia on the avenue west and north of Chevy Chase Circle; next to this the product of the Harber Asphalt Company, and following this the oil of the American Asphalt and Rubber Company." The error occurred in the make-up.

It is planned to construct a board walk of concrete at Rockaway Beach, 50 feet wide and 7 miles long.

The Acres Concrete Post Company has been incorporated at Oklahoma City, Okla., with a capital stock of \$30,000. The incorporators are A. D. Acres, R. C. Acres and H. G. Larsh, all of Oklahoma City.

The Mount Hood Railway Power Company, Portland, Ore., has recently completed a reinforced concrete viaduct across the company's tracks east of Montavilla. The viaduct is 80 feet wide and 100 feet long and was built for \$3,000.

The Concrete Mixing and Conveying Company of Chicago has been incorporated with a capital stock of \$10,000 to deal in machinery, apparatus, building material, etc. The incorporators are George Gillette, R. T. Elwell and Russell P. Fischer.



LINK HOUSE, ENGLAND, WHERE G. W. PACK'S FOREFATHERS LIVED SINCE THE 13TH CENTURY.

EARLY ENGLISH STUCCO CONSTRUCTION.

A fine example of early construction of the stucco order is shown in this picture of "Link House" at Edgerton, County of Kent, on Lord Cornwallis' estate in England, where George W. Pack, of George W. Pack & Sons, Syracuse, N. Y., was born and where his family has resided since the 13th century. The walls are built of stucco and when the house was erected chimneys were not known. Ore has been added in more recent times. The house, though several hundred years old, is in a state of perfect preservation. One of the noticeable features about the house is its style.

ADOPTING ADVANCED METHODS.

The conversion of one of the most important traction companies in the Ohio valley from antedated to modern methods in mixing concrete is illustrative of one of the most interesting phases of the concrete-working development in the central southern territory. The company not only has stepped from old-fashioned plans of mixing gravel, cement and sand to form the most approved type of structural material but has also adapted its facilities to the emergency and is now in possession of one of the handiest and most economical pieces of apparatus for its work that could be imagined.

For some time Louisville, in line with other progressive cities of the country, has been demanding street railway tracks laid on a concrete bed, the most approved style of road construction that is known. Accordingly the Louisville Street Railway Company has adopted the notion and has been concreting its tracks for some time, providing a new and important branch of consumption in the Gateway City. But the traction officials did not adopt modern methods of mixing, and for years the work was done entirely by hand, laborers combining concrete constituents upon old-fashioned boards. The railway company considered that this method sufficed to handle all the concrete work that it would have to do and remained in more or less of a rut all the time.

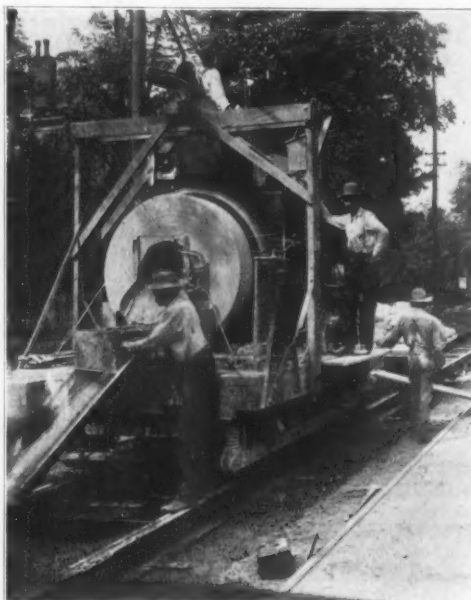
However, within the past few months the railway concern grew wise in the ways of concrete workers and proceeded to combine a mechanical mixer with its own equipment and facilities, so that an effective apparatus was contrived to meet the exigency of more extensive endeavor along this line. A big mixing machine was secured and, instead of producing a stationary, steam-powered piece of equipment, as usual, the company departed from precedent and devised a movable and electrically-

operated machine which is now doing yeoman service.

In concreting the roadbed the Louisville railway officials decided to adapt their facilities to the emergency and secured a flat work car upon which was mounted a Chicago mixer, coupled with a direct motor underneath the machine in the usual position occupied by a trolley motor. The device did away with an enormous amount of expensive and slow moving labor that would normally be occupied if the concrete work had to be laid by hand from a stationary mixer operated by steam. The trolley and the rail formed the connections for the motor which supplied mixing power, as usual, and an auxiliary motor served to propel the car itself either up or down the track. A long circular trough swung by a small stiff-leg derrick from the mouth of the mixer served to distribute the mix wherever it was desired.

The advantage of the electrically-operated and movable mixer is now being demonstrated in the heart of Louisville's downtown district. The busiest section of that part of the city frequented by shoppers is now being laid with creosoted wooden block pavement to provide noiseless and dustless thoroughfares for the retail merchants and their thousands of patrons. The railway company has seized the opportunity offered by the dismantled street along Fourth avenue to lay a heavier steel rail in concrete bedding along the thoroughfare and the new approved mixer is proving its incalculable worth.

A night and day shift of workmen is employed,



ELECTRIC PORTABLE CONCRETE MIXER EMPLOYED BY LOUISVILLE RAILWAY COMPANY.

as both the paving contractors and the railway officials are rushing the work of downtown improvement to completion. The electric car bearing the mixer moves up and down that portion of the heavier track which has already been laid, distributing concrete along either rail by means of the long, movable "snout." Workmen pack the mix with shovels and the job is nearing completion in the most approved twentieth century manner.

WATERPROOFED CONCRETE SOAP VAT.

In the accompanying photograph is shown an unique construction in concrete. It is the reinforced concrete soap vat of the Proctor & Gamble Company, at Armourdale, Kan. The tank was built of Great Western Portland cement, furnished by the Great Western Portland Cement Company, at Mildred, Kan. The tank is 30 feet long, 15 feet wide and 18 feet deep, and has a concrete wall 8 inches thick. It was built to hold a hot solution of cotton oil, sodium sulphate and sodium chloride. This makes a strong alkali solution and its action is very hard on any concrete. All the cement used in this vat, 60 barrels, was waterproofed by the McCormick process of waterproofing Portland cement, and the action of the acids on the concrete has not been enough to notice. Most soap manufacturers have had the experience of having their concrete tanks eaten away by the acids, but no such action has taken place on this waterproofed concrete. The tank was built



CONCRETE BARN ERECTED BY THE HANKINSON CONCRETE COMPANY, HANKINSON, N. D.

early this spring, and is now in better condition than when it was first constructed.

A CONCRETE BARN.

The accompanying photograph shows a concrete barn built by the Hankinson Concrete Company, Hankinson, N. D., of which A. G. Peterson is the manager. The structure was recently erected at Childs, Minn. It covers a ground space 32 by 48 feet. The wall extends 5 feet below the floor level and 12 feet above, 6 inches thick and the floor as well as the wall is solid concrete. This makes a building that will last forever and the total cost was only \$1,400, including oat bins, stalls, mangers, stairs, etc., all painted two coats, in fact built all ready for occupancy. This same barn, if built of lumber, would cost \$1,200, making a difference in cost of only \$200 between a temporary structure and one that will endure forever.

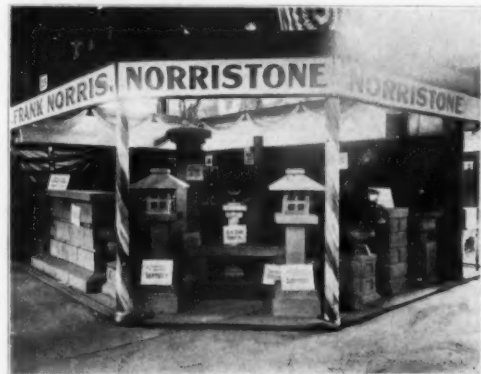
Rollin F. Myers, of Hillsboro, Wis., is equipping a new concrete block factory and is in the market for machinery.

St. Joseph Reinforced Concrete Company, St. Joseph, Mo., are establishing a new yard to handle their product on more economical lines. They say that their method of wet mix reinforced concrete pipe has been proven to be a success, and the present demand exceeds their supply.

National Concrete Machinery Company, Wilmington, Del., was chartered under Delaware state laws October 19; capital, \$100,000.

Egyptian Cement Products Company, Williamsport, Pa., received a Delaware state charter November 7; capital \$100,000.

We are printing in this issue a reproduction of the photograph of the Norristone exhibit at Rochester's Fourth Annual Industrial Exhibition. This exhibit was pronounced by contractors and concrete experts to be one of the finest they had ever seen. As is well known Mr. Norris has made a tremendous success in the concrete industry by the manufacture of a product which he calls Norristone. In a recent issue of ROCK PRODUCTS we gave a complete description of his plant at Rochester.



NORRISTONE EXHIBIT AT ROCHESTER, N. Y.



WATERPROOFED CONCRETE SOAP VAT OF SWIFT & COMPANY, BY MCCORMICK PROCESS.

FAILURES

In the Concrete Block Business Discussed by a Former Concrete Block Manufacturer and Salesman of Machinery.

By F. S. Phipps, Chicago, Ill.

In studying the cement block business of the middle and western portion of the United States, the writer has had the pleasure of visiting a great number of plants in the past year and he finds three conditions which are a great drawback to the industry:

First—Poor and insufficient machinery caused by lack of capital and education as to the correct machinery to be used.

Second—Inexperience of party or parties operating cement block plants with cement and its usages.

Third—Trying to produce a product that is cheaper than any other material on the market.

The first condition, prevailing in almost every plant that has failed in business or has lost money in the cement block line (this includes about 75 per cent of the plants), is the lack of machinery sufficient to turn out a good product that is adapted to the building business. This is caused by two conditions: The first is lack of capital to purchase the machinery, and the second is knowledge as to what kind of machinery is required. A great deal of the latter trouble may be laid at the door of the cement machinery manufacturer and his agents.

It is a very common thing to hear a man in the cement block business say that he would not have gone into the business if it had not been for some machinery agent, having told him that he did not need any experience in the concrete business, and that cheap machinery would produce the same results as a high-priced equipment. This condition of affairs has hurt you, Mr. Machine Manufacturer, as well as it has hurt the cement manufacturer. It is giving the manufacturers of other building material a great chance to condemn the concrete block business. Unless there is a change the business will soon be an industry of the past.

I do not know of any business that has looked so promising and yet has had so many failures and disappointments as in the manufacture of concrete blocks. There are all over the country many small plants that have gone out of business on account of inexperience and lack of capital, and a number of large ones have ceased to do business for the lack of experience and machinery.

I can see no other place to lay the blame for a large percentage of the failures except on the selling end of the machinery manufacturers.

The different companies that manufacture machines have been too anxious to sell their machine. They have sold them regardless of price and the ability of the man that was buying them to operate them successfully. A great many machines have been sold that were never paid for or only partly paid for. This has caused machinery manufacturers to go bankrupt or to cease to manufacture. Every time a concrete block plant closes or a machine is thrown into the junk pile, the competitors of the concrete block manufacturers gain another victory.

The manufacturer of machinery, or his agent, should study the buyer and the conditions that the machine is to be used under. He should get a price for his machinery that will enable him to produce the best possible machine. It should be placed in hands that are capable of operating and producing a good product.

As to the second condition of affairs: We find the inexperienced man starting in the block business. In the first place he is not familiar with the building business and does not know what the demand will require of the plant. A greater proportion of these men have never had any experience in handling cement and many of them only in a small way, laying sidewalk or cellar floors. A great many of them are not able to figure from architect's plans and do not know what is necessary in the erection of a building. There are exceptions, of course, along this line, but the poor workman and inexperienced man drags down with him to RUIN the man who is capable and experienced.

I find that many plants do not proportion their cement, sand and gravel properly. There is too much guess work along this line; for instance: One plant measures by shovels-full, which is mere guess-work; another will use a wheelbarrow which will vary, and once in a great while you will find a plant that is measuring its material accurately. Many plants were started with the expectation of making large profits in the manufacture of blocks. The price was set before the cost of the product was known, and when the manufacturer found that he was losing money, instead of raising the price,

he reduced the amount of cement which, of course, has helped to RUIN the business.

Many other plants are making blocks with a rich face and the rest of the block entirely too poor, to get good results. Many plants do not mix their material sufficiently, and do not add water enough to produce a good material.

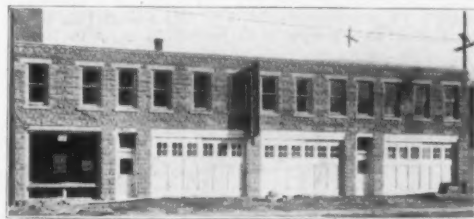
The block manufacturer who has had the experience and is producing a good block, knows that he must use the right proportion in accordance with his sand and gravel, and that the same must be thoroughly mixed and must have water enough to cause it to set properly and it must be taken care of during the curing process.

There are many block manufacturers over the country who make their blocks and set them out in the sun to dry. It is no wonder that they do not get a good material and that many of them eventually come to the sad end of failure in the business.

These are the reasons which have caused many cities to draw up building ordinances which almost prohibit the block manufacturers from doing business.

We find cities where you can build a nine-inch brick wall out of the poorest and cheapest brick, but the concrete block must form a twelve-inch wall. This concrete block should be a much better material and the manufacturer should not and would not be required to build a thicker wall than is called for by other building materials, if his product was properly proportioned and properly made, and properly cured.

Many manufacturers of cement products rely too much upon what is told rather than experience. How can a man tell what proportions to use when he does not know the gravel or the sand that the manufacturer is going to use. Few plants have suitable places for storing cement. The cement becomes dead or set by the time the block maker uses it, it produces a poor article and he claims then that the cement is of poor quality and lays the blame



GARAGE IN ILION, N. Y., BUILT OF CONCRETE BLOCKS MADE BY THE SHOLES-DOTY CONCRETE COMPANY.

upon the cement manufacturer, whereas the real cause is that the cement has not had proper care, and has not been properly used. I believe that unless the cement manufacturer educates the cement block manufacturers to the proper use and handling of cement that the business will gradually decrease instead of increase.

It is a fact that it has been hard to procure labor that is sufficiently experienced in the handling of concrete and the manufacturing of blocks.

It is no wonder that the architect in many cases has refused to specify concrete blocks, as the quality of the blocks has in many cases been very poor. We find that if we can produce a good block, properly proportioned, made and cured properly, the architect, the contractor and the builder will use it. It is surprising how quick our competitors in other building material will find a concrete block house that has cracked or a silo that has failed to stand, and uses it as an argument against the use of concrete blocks. They fail to tell you of the disasters of the other materials that have resulted through poor workmanship and poor material. There is much that could be said along this line, but the writer will not go further into this matter at the present.

I wish to say a few words upon the third condition of the block business. That is, trying to produce a cheap material. The general impression of the concrete block business is, that it produces a material for building that is far cheaper than any material on the market. They do not take into consideration the durability of concrete construction. Many of the manufacturers both of machinery and concrete blocks tell how cheap cement products can be produced and the plants become too anxious to secure the contracts to furnish the blocks and take the jobs at less than they can produce the material. This causes them to make inferior grades of blocks and is another milestone on the road to ruin of the concrete block industry. I have dwelt on a few of the points that have caused so many failures along this line. In future articles I will take up the subject of GOOD BLOCK MAKING, which will include the proportioning, making and curing of concrete blocks.

PITTSBURGH CONCRETE NEWS.

Pittsburgh, Pa., Nov. 17.—Pittsburgh never saw a time when prospects for concrete work was so bright as at present, even in the palmy days of 1904 to 1907. The number of real immense projects that are to be undertaken by the new city council and by corporations of Pittsburgh as soon as certain technicalities can be arranged is sufficient to guarantee for 1912 an amount of concrete work in this city which will eclipse all previous records. In this respect the Pittsburgh Industrial Development Commission is going to cut a big figure. Its plan of boosting the city by securing costly improvements and getting new manufacturing plants here is bearing fruit every day. The outlook is for a larger number of manufacturing plants to be built in the Pittsburgh district in 1912 than in any previous year and the statements of concrete engineers all over the city go to show that three-fourths of these plants will be of concrete or reinforced concrete construction. Engineers are much more busy in proportion even now than ordinary building architects, showing that this form of construction is gaining friends every week.

The firm of D. G. Stewart & Geidel, which own the big elevator on West Carson street, operated by the Iron City Elevator Company, and which burned last week, has announced that it will replace this structure with a modern reinforced concrete elevator 100'x150'. The old elevator had a carrying capacity of 350,000 bushels of light grain and the loss on the building was nearly \$100,000.

Irvin & Witherow have completed the Morgantown & Kingwood reinforced concrete shops at Morgantown, W. Va. They also let to L. S. Brock the contract for a three-story reinforced concrete plant 150'x60' for the Bergrstrom Steel Spring Wheel Company of Washington, D. C. They also are the consulting engineers on the Duquesne Engineering & Foundry Company plant to be 52'x82' at Coraopolis, Pa., for which the contract was let to W. T. Powell of this city. The firm reports fully ten per cent more reinforced concrete construction work this year than in 1910 and say that owing to its economy and efficiency combined reinforced concrete construction practically demands instant recognition now from any builder.

The Cuthbert Brothers Company has secured the contract for a \$15,000 station for the Pennsylvania Lines West at Dunkirk, Ind. Also for a reinforced concrete plant for the D. D. & P. Company at Steubenville, Ohio, to cost \$25,000.

Allegheny county commissioners let the contract to the C. M. Neeld Construction Company for rebuilding the Port Perry bridge which was lately washed away. Contracts will have to be awarded this fall also for building twenty bridges in the Turtle Creek district which were taken away by the recent floods.

Spang, Chalfant & Co., from plans by Irvin & Witherow, are building a \$100,000 reinforced concrete plant on the Allegheny river. The piles range from 25 to 40 feet long, aggregating 8,800 feet. The 25-foot piles were 16 inches in diameter and the 40-foot piles 20 inches. The machine shop is 467'x100' and socket forge buildings is 142'x120'. The total cost of the plant was 91 cents per square foot or 2 1/2 cents per cubic foot.

The Crescent Portland Cement Company at Wampum, Pa., is doing a big business this fall. It has been averaging about 4,000 barrels a month recently and finds the prospects for winter trade exceptionally good.

THE SHOLES-DOTY CONCRETE COMPANY.

Ilion, N. Y., Nov. 16.—The office and plant of the Sholes-Doty Concrete Company, of Ilion, is located at 54 West Canal street. It was established seven years ago. It manufactures all kinds of concrete bricks and granite face blocks, chimney and foundation blocks, dimensions, etc. It has excellent transportation facilities, shipping its product to Utica, Little Falls, Canajoharie and neighboring towns. It employs twenty-five men and takes contracts for concrete sidewalks, foundations, buildings, etc. The factory is equipped with a C. S. Wert brick machine, a block machine manufactured by the Hobbs Concrete Machinery Company, of Detroit, Mich.; a stripper installed by the Hayden Manufacturing Company, of Columbus, O.; a "Hercules" block machine, made in Buffalo; a Kramer Automatic Tamper run by electricity, and contains two large steam rooms where the green blocks are cured. Tracks run transversely the length and width of the factory on which platform cars are run, conveying blocks to and from curing rooms and loading points. R. E. Sholes and Howard S. Doty are the proprietors of this concern. Mr. Doty reported business good this year.

POURED HOUSES

American Sheet and Tin Plate Company Constructing Residences for 100 Families, Employees at Gary, Ind., By the Most Modern Methods.

The American Sheet & Tin Plate Company is building at Gary, Ind., solid reinforced concrete houses for 100 families west of Broadway and south of the Lake Shore tracks. The result will be that the workmen employed by this company at Gary will be better housed than any other set of workmen in the country. The building of these solid reinforced concrete houses is the result of the investigations, experiments and agitation that has been going on in the country, and the enterprise presents many interesting features on that account. It may be said at the outset that the purpose of the company is one of cooperation and not entirely philanthropic. The houses will be rented on a very nominal basis, \$3 a room, and will return a fair investment. But from the workman's standpoint, his family will have a beautiful home, much more substantial and attractive than he could rent elsewhere. So it may be said without flattery and with candor that here is a corporation that has a soul.

In this group of houses there are three types of apartment buildings, containing four rooms each, two of three rooms and two of five rooms with private porches, residence terraces consisting of ten three-story connected structures and a few detached dwellings of two stories and of five and six rooms each.

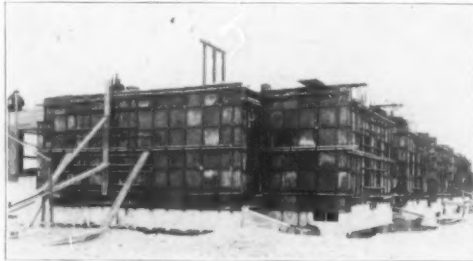
The accompanying illustrations show the forms that are being employed in the construction. The forms are furnished by the Reichert Manufacturing Company of Milwaukee, Wis. The forms are in 24-inch units and are subdivided as low as 6 inches for the special features. It may be said in a general way as describing these forms that they are placed continuous over all openings. Wooden window and door casings are placed in the forms where called for in the plans. In this way complications are avoided. The steel plates are held together by bolts passing through short sections of iron pipes cut of a length equal to the thickness of the wall and act as spacers. As a rule, the forms are erected for an entire floor or story and this entire section is cast. It has been necessary to rush the construction, and while concrete floors are designed in all cases some of them are of wood.

The rule in these structures is an eight-inch outer wall with a four-inch partition wall. The mixture is 1-2-6. Where concrete floors are placed they are trowel finished except for a strip one foot or less in width around the sides of the room, where later wood flooring will be placed. For the window and door sash and for the stairs and picture moldings and plate rails wood has been used.

It is interesting to note that there is no plastering in these houses either interior or exterior, the Reichert forms leaving the walls with a smooth, uniform surface, with almost no marks. The illustrations of the incomplete houses show marks, but the pictures were taken before the walls were finished after the removal of the forms.

Before any concrete is poured into the forms the inner surface of the steel plates receives a coat of paraffine to prevent the concrete from adhering to the plates and marring the surface. Calcimine will be applied to the inner surface of the walls and a filler is placed on the outer surface. It is intended to experiment also in the way of applying pebbles to the outer surface by the use of compressed air.

It is the aim and general purpose of the company to make each house as perfect as it can be made. While it is true that the rooms are small, the houses will be comfortable. They range in size from the three-room apartments to the nine-room three-story houses. Individual basements have been provided both for the houses and apartments, and there are furnace, coal and laundry rooms. For the heating arrangements tile are imbedded in the walls to convey the heat from the



MOLDS READY FOR THE CONCRETE.

furnace to the various rooms. There are also fire-places molded in concrete. Metal coal chutes are provided and the houses are all wired for electric lights. So far as it is possible to do so, all fixtures for the kitchen are molded in concrete. The ceiling of all rooms where there is to be no floor overhead is of plaster over woven wire mats. The houses have tin roofs on wooden framework.

The footings for the entire work were placed in September, 1910. As to the rapidity of construction by the methods used it may be stated that in the case of one terrace of ten houses the time was sixteen days from the placing of the first forms to the removal of the last. The finishing of the surfaces is not included in this time. Of course, it should be remembered that at the outset the workmen had to become accustomed to new methods,



SHOWING METHOD OF PLACING THE REICHERT MOLDS.

and as the enterprise progressed better time was made. It became necessary for one reason or another to change plans.

One of the specially interesting features of these houses is the system of forms used as referred to above, and a description of it may not be amiss.

The Reichert system of metal forms is based on a unit plate 24 inches square. Fractional sizes permit the construction of walls of any length or floor panels of any dimensions, and rigid and hinged corner connections enable the builder to make angles at any degree. The plates are solidly built of galvanized sheet iron, reinforced with

mild steel angles. Each plate is fitted with a simple locking device (not detachable), by which it can be quickly and securely fastened to the adjoining plate or to the corner connections. Stay rods, adjustable to the thickness of wall desired, separate the plates, which are wired together through the wall the same as ordinary wooden falsework.

Two workmen can set up and wire the first course of forms for 150 lineal feet of wall in two hours. This portion of the work done, and the line gotten, the builder can start his mixer. Two men can then set up and wire the other courses of plates faster than the average mixer can turn out concrete to fill them.

After the first course is set up and partially filled with concrete the second course, which is an exact duplicate of the first, is set up on top of the first. If only two courses are used the first course, set up on top of the second, becomes course No. 3, and the second course in turn becomes course No. 4, and so on until the wall is completed. Variations in the thickness of the wall are taken care of by making slight changes in the proper course of plates. Where Reichert Metal Forms are used on one side of the wall only, the bank of the excavation being used as the other side of the form, it is necessary to shove the metal forms in place with wood, the metal simply taking the place of the wooden face of the form.

The Decatur city council and others recently paid a visit to South Bend, Mishawaka, Aurora, Batavia and Elgin, Ill., to inspect reinforced concrete bridges, with a view of recommending a similar structure in Decatur. They were enthusiastic over reinforced concrete as a building material, and taking all into consideration the consensus of opinion is that this would be the most beautiful, solid, permanent and economical structure.

A manufacturing plant to cost about \$50,000 will probably be built by the Milwaukee Concrete Mixer & Machinery Co. of Milwaukee, Wis. The business of the company has increased to such an extent that it will hereafter manufacture its own machines. Several sites are being considered. The company has recently been reorganized and A. G. Boden has become an active member.

Few farmers' institute meetings in Illinois this year heard speakers upon the subject of concrete for use in connection with farm work. A year ago nearly every session gave considerable time to the discussion of cement.

The city council of Galesburg, Ill., is preparing to adopt an ordinance providing for a test for all concrete work done for the city. This test will conform to that of the American Society of Civil Engineers.

Roach & Stansell of Memphis, Tenn., have been awarded a contract to build two reinforced concrete dams in a canal which will be built by the Medina Irrigation Company in Medina county, Texas.

The Johnson Cement factory at Sterling, Ill., has not been sold to R. H. Ramsdell. Mr. Ramsdell merely purchased the stock and rented the factory for a number of years.

The Bager Manufacturing Company of Evansville, Wis., has announced its intention of building a five-story warehouse of concrete to cost \$100,000 at Fort Dodge, Iowa.

J. C. Bothwell, of Fairfield, Ill., is said to be contemplating a concrete tile factory at Mt. Carmel, Ill. There is an abundant supply of suitable sand.



ONE OF THE MORE PRETENTIOUS CONCRETE HOUSES.

SHOWING APPEARANCE OF HOUSES JUST AFTER THE MOLDS HAVE BEEN REMOVED AND BEFORE THE FINISHING TOUCHES HAVE BEEN PUT ON.

CONCRETE SUBDIVISION

Chicago Real Estate Firm is Building All the Houses in Their New Subdivision, West of Chicago, of Concrete, Using Morrill Moulds,

The first all concrete suburb of Chicago is now well under way, on the subdivision of E. A. Cummings & Co., at High Lake, twenty-eight miles west of the city.

Early in the year this firm purchased a tract of 200 acres on high, rolling ground a few miles beyond Wheaton and just this side of West Chicago.

From the start it was determined to build a number of homes which should be in harmony with their surroundings, contain so many as possible of

D. C., at the Chicago Cement Show, last February. They were greatly interested in the method of building concrete residences, as developed by Milton Morrill, the Washington architect, who is president of the above corporation. Equally were they impressed with the simple and attractive designs for inexpensive four, five and six room houses which Mr. Morrill had so well worked out as a result of his combined experience as a successful architect and as a worker in and experimenter with concrete.

It was only a short time after this before a decision had been reached to use concrete exclusively on further construction at High Lake, employing Morrill moulds for shaping the walls and using Mr. Morrill's designs in planning both houses and

The houses at High Lake are built on foundations nine inches thick, with the walls above of six inches thickness.

Reinforcing steel, horizontal and perpendicular, is used throughout the walls. Concrete is water-proofed when mixed and with the air space formed by the furring strips to which the lath is nailed makes a wall which is proof against dampness. When the plates are removed the finished walls are either left smooth or are brushed over with strong steel brushes to bring out the stone or gravel thus giving an attractive rough finish and bringing out the different colors of the mixture.

Basement and porch floors are poured as are also the front and rear steps and sidewalks. The ex-

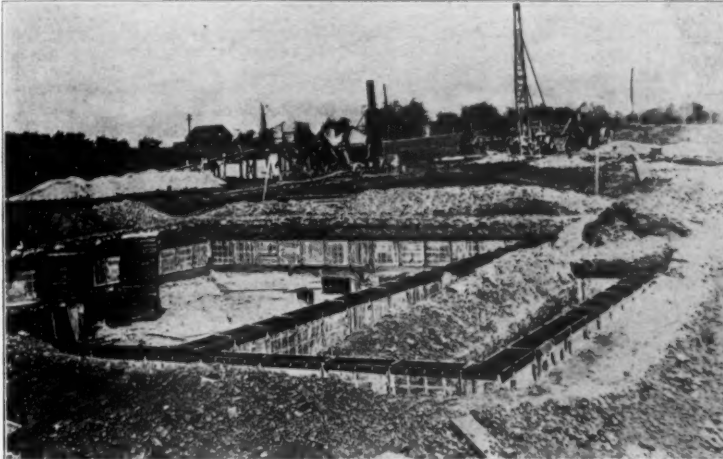


FIG. 1.—FOUNDATION COMPLETED AND MOLDS IN POSITION FOR FIRST POURING OF CONCRETE.

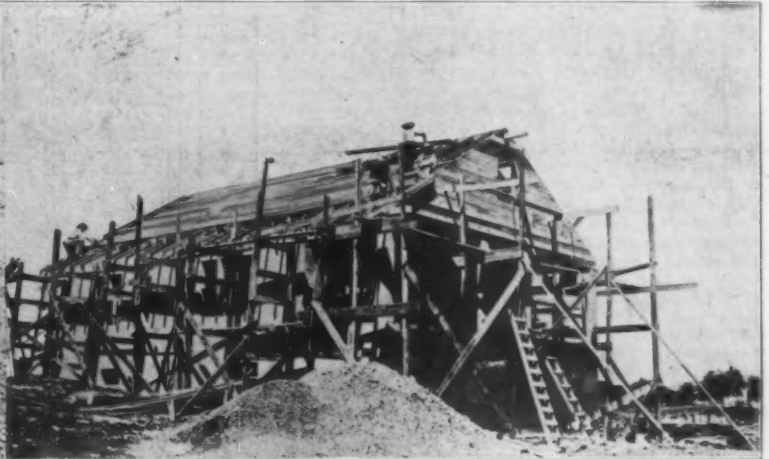


FIG. 3.—SAME HOUSE AS FIG. 2.—TAKEN NINE DAYS LATER. POURED CONCRETE HOUSE AT HIGH LAKE.

the most modern conveniences, have a style and finish that would appeal to people of good taste and at the same time come within a cost limit not out of reach of the average man and woman.

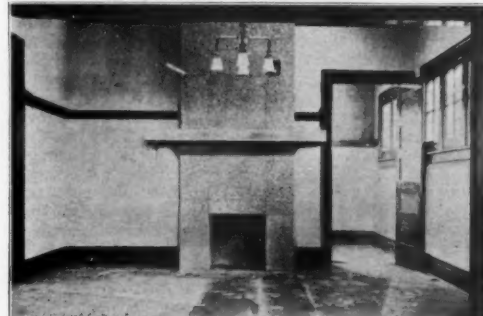


FIG. 6.—INTERIOR VIEW OF BUNGALOW AT HIGH LAKE.

Two houses of the usual frame construction so generally used in suburban architecture had been started when E. A. Cummings saw the exhibit of the Morrill Moulds Corporation, of Washington,

bungalows. They said after carefully looking into the matter they had decided this method was more durable than any other construction known and would improve, rather than otherwise, with age. It also appealed to them because it was cold-proof, damp-proof and fire-proof, sanitary and offered the least opportunity for the lodgment of dirt or vermin. Also the buildings would not require painting, would have a better appearance after completion than other kinds of construction and then would cost less to maintain.

As soon as possible they secured the rights for the use of the Morrill Moulds in Cook and Du Page counties and had two sets of the moulds delivered at their subdivision. W. L. Twining, of the real estate firm, has had entire charge of the construction work and has encountered little or no trouble since the experience he gained in putting up the first house. Six residences have been completed and with an early start next spring and an active demand for more of these houses, a large number are sure to be built in the season to come.

In the September issue of ROCK PRODUCTS the method of using and rapidly changing the flexible steel moulds employed in the Morrill system was so fully described that nothing further need here be said about it. Reference to the accompanying illustrations, taken at High Lake, will give an idea of the rapidity with which concrete construction done by this system may be pushed.

perience at High Lake has been that from six to twelve hours, according to the weather, are required to set the concrete enough so the moulds may be safely removed.

They cost \$3,500 to \$4,500, according to size and

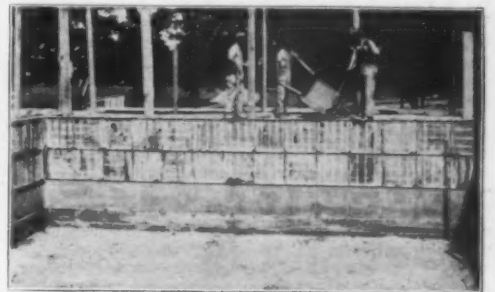


FIG. 2.—TWO DAYS LATER. FILLING THE MOLDS FOR THE SECOND TIER.

location. As about \$800 of this charge represents the value of the acre lot and a liberal margin of profit is still left, it will be seen the actual construction cost has been brought very low on this group of houses and other real estate men are likely to profit from the experience of E. A. Cummings.



FIG. 5.—POURED CONCRETE BUNGALOW AT HIGH



FIG. 4.—TWO POURED CONCRETE HOUSES AT HIGH LAKE NEARING COMPLETION.

MIXING PLANT

Unique Method of Mixing Concrete Devised by the Hinckley Construction Company For the New Barge Canal.

One of the most interesting concrete mixing plants recently constructed, is that erected by the Hinckley Construction Company, near Hinckley, N. Y., for building the large core wall, for the dam on the new Barge canal, running through that state.

This canal is one of the largest undertakings now under construction in this country, and the methods used by some of the contractors are exceedingly interesting. The concrete mixing plant of the Hinckley Construction Company deserves considerable attention on account of the cheap cost of handling the material to the mixture, and the low cost of mixing by a gravity mixer.

The plant was designed by F. V. E. Bardol, who is in charge of the work, and who was formally city engineer for the city of Buffalo. Mr. Bardol made a very thorough investigation of conveying systems and mixing plants in the East, and also the west, and purchased a gravity mixer, manufactured by the Hains Concrete Machinery Company, of Washington, D. C., an invention of Captain P. C. Hains, Jr., of the United States Army, and a "30" belt conveyor system, having steel idler pulleys, furnished by Raymond W. Dull & Co., of Aurora, Ill.

We are showing a working drawing of the plant arrangement, as well as a photograph taken after completion.

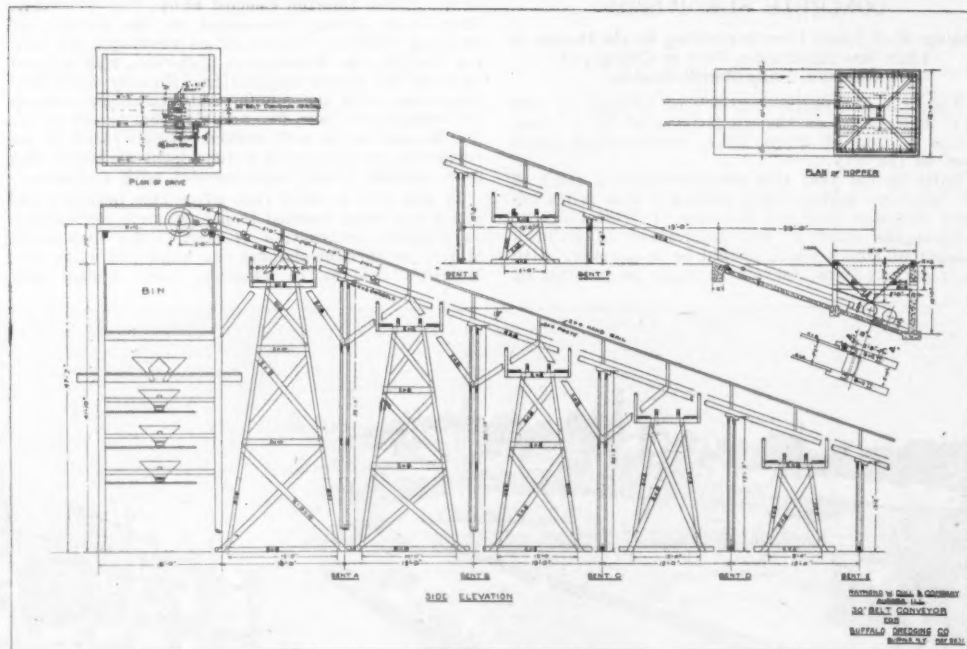
The concrete materials are brought to the hopper by cars, and delivered from the hopper to the "30" belt conveyor through a gate in the hopper. The different kinds of material such as sand, gravel and crushed stone are delivered to different compartments in the bins over the mixer. Even the bags of cement are carried up the belt and placed in a position handy to the mixing hoppers.

The belt conveyor is 75'-0" long, and is equipped with the pressed steel idler pulleys, which are practically indestructible. The heavy pieces of stone and the heavy bags of cement make it necessary to use the extra strong idlers, as the ordinary cast iron idler pulleys would hardly have strength enough for such service.

Mr. Bardol in his trip to the West, examined practically all of the important sand and gravel plants in the vicinity of Chicago, all of which have adopted the steel belt conveyor idlers, invented by Mr. Dull.

The Hains mixer mixes concrete by forcing the wet sand and stone, or gravel, through the dry cement powder, thereby coating the particles with a film of cement paste and, by means of suitably shaped receptacles, imparts the proper motion of rotation to the entire mass to complete the mix; in other words by rotating the mass of ingredients, but not the mixer.

The mixer consists of four small top hoppers set upon a frame support, which latter also carries a platform on which the men are stationed to load



the cement, sand and broken stone into the mixer. Below these top hoppers three large hoppers are set, one below another.

The cement is preferably delivered to the platform in bags. The cement is first put into the top hoppers, is leveled off, and the proper proportion of gravel and stone added, which, in turn, should be leveled. The desired quantity of water is then sprayed or dashed evenly over the top of the stone, wetting the entire charge except the cement, which, being in the form of an impalpable powder, acts as a dam and remains dry, the top surface only becoming wet.

The gates of the top hoppers are now opened simultaneously, or in quick succession, and the small batches pass through the contracted orifices into the large hopper immediately below, where they are caught and held. When this hopper has been filled its gate is opened and the contents pass to the next hopper below, where they are again caught and held. This operation is repeated and the concrete is finally received in the bottom hopper ready to be delivered to the finished work.

The method indicated on the drawing shows a bin set over the top hoppers and divided into compartments for the sand and stone. The sand and stone are fed into the top hoppers through orifices in the bottom of their compartments. These orifices are opened and closed by valves operated by men on the platform.

One laborer is generally stationed on the platform supporting the middle hopper. He operates the gates of the first large hopper, while a second laborer operates the gate of the middle hopper and

spills the concrete into the lower one. The concrete is then ready to be delivered into cars or buckets to be taken away.

It is thus seen that the concrete does not run continuously through the hoppers, but is dropped from one tier to another, the hopper last emptied being always ready to receive the charge from the one above it, so that the process becomes a rapid succession of steps.

It is also seen that the limit of rapidity to mix is only determined by the speed of handling the ingredients. The sand and stone may be delivered into the top hoppers in any way that is convenient. The best method will depend upon local conditions.

By using funnel shaped hoppers of suitable proportions and pitch, it has been demonstrated that the ingredients issuing from any one hopper fall inward at the center first, the outer portions following in the same manner, the entire charge being caused to revolve upon itself, and, further, to be ground together in passing through the contracted outlet at the bottom of the hopper. The motion generated is similar to that of sand passing through an hourglass, that portion of the charge near the bottom coming out, in the hopper below, near the top. This hourglass effect which is very much like pulling a stocking or sleeve wrong side out, causes a complete rotation of the entire mass each time it is brought into operation, and when repeated a few times will give a mixture of surprisingly uniform and intimate incorporation.

The plant, on account of the simplicity of its construction and method of operation, its phenomenal output, its excellent and low cost of finished product, is an excellent example of plants of its kind.

The American Construction Company of Chicago has closed a deal with officials of the Cement Post Company, of Janesville, Wis., whereby the Janesville plant and an adjoining site was transferred on a land contract to the Chicago concern. It is understood that the American Construction Company will take possession of the plant and open it within a few weeks with a force of 100 men. The plant has been closed down for some time.

Negotiations have been closed between F. C. Minogue of the Iowa Foundry and O. R. Taylor, president and general manager of the Universal Concrete Machinery Company of Waterloo, which consolidated the two concerns. The Waterloo factory will be moved to Fort Dodge, Iowa, and run with the present local plant under the name of the Iowa Foundry and Manufacturing Company.

The Tri-City Railway Company awarded to Beder Wood, of Moline, Ill., the contract to furnish material for the reinforced concrete bridge now in course of construction on Second street, Moline, on the Elm street car line. Mr. Wood will supply 800 barrels of cement and 400 cubic yards of sand.

The Atlanta Cement Products Company, incorporated to manufacture blocks and paving tile, has been organized in Atlanta, Ga., by Messrs. J. B. Lee, J. G. Flournoy and John W. Lee. Plant and equipment is to be secured at once.



MIXING PLANT OF THE HINCKLEY CONSTRUCTION COMPANY, HINCKLEY, N. Y.

The Sheboygan Land & Lime Company of Oshkosh, Wis., are in the market for a steam pump.

Juniata Sand Company, Sunbury, Pa., was incorporated under Pennsylvania state laws October 12; capitalization, \$10,000.

Pennsylvania Lime Products Company, Philadelphia, obtained charter under Delaware state laws October 11; capital, \$100,000.

The Alabama Lime & Stone Company, Chattanooga, Tenn., are making extensive improvements and increasing the capacity at their works at Paint Rock, Ala.

William Messerschmidt, of New Concord, Ohio, is going into the manufacturing of concrete blocks and other products and is in the market for concrete block machines and mixers.

The Lincoln Sand & Gravel Company, of Lincoln, Ill., are going to increase their capacity to forty cars per day and are going to install new screens, additional track and a second pump.

C. E. Sikes, of Hampton, Ill., is building a wharf on the Mississippi river for the sand and concrete block business, and will erect a warehouse for storage. He expects to install sand pumping machinery at this point.

The Ohio Gravel & Sand Company, of Columbus, Ohio, are going to install a gyratory crusher to take care of the tailings from their No. 5 Gates crusher. They are also in the market for a No. 3 or No. 4 Austin gyratory crusher.

Standard Lime & Stone Company of Fond du Lac, Wis., are going to build another kiln at their Knowles plant. They are also interested in getting the names of parties who have raw material for lime and plaster in Colorado or Wyoming.

The R. C. Jarvis Company of Port Huron, Mich., is in the market for sand driers. They say, we manufacture a wood pulp for plaster. It is a very long fiber, made of white poplar, and is very desirable because of its unstaining qualities.

The Atlas Sand & Gravel Co., of Columbus, Ohio, is building a new washing plant and installing automatic screens, settling boxes, conveying and transmission machinery at their pit near Zanesville, Ohio. Raymond W. Dull Co., of Aurora, Ill., are making the installation.

The Springfield Trap Rock Company, of Baltusrol, N. J., has been incorporated to quarry, crush and manufacture all classes of stone, with capital stock of \$50,000. The incorporators are: T. M. Quinn, Long Island City, N. Y.; O. Demarest, of Springfield, N. J., and W. S. Butler, Brooklyn, N. Y.

Huron Shore Gravel Co., of Saginaw, Mich., which has been recently incorporated for \$30,000, are installing a new washing plant near Greenbush, Mich. Raymond W. Dull Co., of Aurora, Ill., have the contract for furnishing the belt conveyors, washing screens and crushers and all transmission machinery.

NOW IS THE TIME TO BUILD.

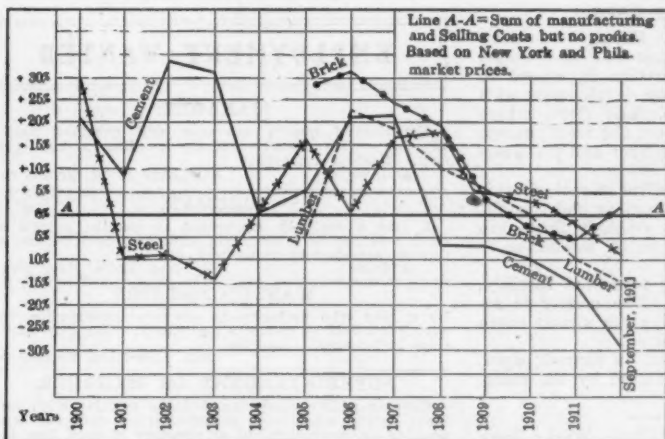


DIAGRAM WHICH TELLS ITS OWN STORY.
[From the Mason Builder.]

SAND-LIME BRICK

EIGHTH ANNUAL MEETING.

The eighth annual meeting of the American Association of Manufacturers of Sand Lime Products will be held at Grand Rapids, Mich., December 5 and 6. The opening session will be held at 10 a. m. All meetings of the association are held in executive session and only members with their invited guests may be present at the meetings. It is expected that there will be a full attendance this year for the members of the association are unanimous in saying that it has been the means of saving the day for many of them and that each year it proves of greater value.

These annual meetings are of inestimable value to those attending for they meet practically every successful manufacturer of sand lime products in the United States and Canada. One of the rules of the association is the exchange of experience for the mutual benefit of all the members. This enables many of the manufacturers to avoid a number of the earlier difficulties natural to a new industry, and place the business upon a successful basis, both as to quality and financial results. No manufacturer of sand lime products can afford to lose the benefits of the association or fail to attend the annual meeting.

While the association has a standing committee on information to whom questions and troubles can be referred at all times and prompt answers received, at the same time the value of two days in the company of men of experience in your line of business, who will answer all questions freely and honestly, must not be overlooked. Before or after the meeting all the members of the association are invited to visit the new sand lime brick plant at Kalamazoo, Mich., where the new process introduced by the Jackson & Church Company is in operation. An invitation has also been received from the Grande Brick Company, at Grand Rapids, requesting the members to visit their plant.

A. & C. Stone & Lime Company, of Indianapolis, Ind., expect to install a hydrating plant this spring.

The Central Missouri Lime Company, of Jefferson City, Mo., has increased its capital stock from \$10,000 to \$50,000.

The Alabaster Lime Company, of Auburn, Cal., H. M. Power, manager, has commenced operations at its quarry. The material will be shipped from the site to Newcastle by an automobile truck which the company has recently purchased, and distributed from Newcastle by rail.

The Toronto Lime Company, of Limehouse, Ontario, in a recent communication say: "Business has been very good, and we are at present installing an air compressor for doing plug hole work. We read your paper with great interest and especially your reports of the different conventions. Will try to get over to some of these big gatherings you take such pride in."

DETROIT LIME NEWS.

Detroit, Mich., Nov. 18.—Generally speaking, lime companies in different parts of the state have been busy during the past month. There has been a steady demand for the product from building contractors in different parts of Michigan, and the prediction made in ROCK PRODUCTS, early in the year, that this would be the greatest building season in the history of the state has come true. There hasn't been a city in the state but what has experienced a heavy growth during the year, and in Detroit, Grand Rapids, Saginaw and Kalamazoo has this been particularly true.

The Church Quarry Company reports a good demand for lime from its plant during the past month, and the firm is entirely satisfied with business prospects. This firm, which is associated with the Church Brick Company, operates one of the largest quarries in the country at Sibley, twelve miles south of Detroit. The quarry covers ten or fifteen acres, and is one of the most complete in the West.

The Buffalo Sandstone Brick Company reports that it has sold all the brick in stock and has orders in sight for another three months' business.

The Flint Sandstone Brick Company, Flint, Mich., recently stated:

"We expect to begin the delivery in ten days of 1,300,000 sand-lime brick for the Olds Motor Company's new building at Lansing, Mich. This is a fine job and will serve to introduce our brick in great shape."

INSTALL LATEST MACHINERY.

The American Clay Machinery Company, of Willoughby, Ohio, as is their usual custom, have again come forward with further improvements in machinery for the manufacture of high grade sand lime, or silica brick. The accompanying illustration shows their latest sixteen mold rotary sand lime brick press, on board cars at their Willoughby factory, and being made ready for shipment to the Tift Silica Brick & Stone Company, of Albany, Ga. The Tift Company has been in operation for about fourteen months. They use a division method for the manufacture of their brick, and in order to improve their product and to secure a better average daily output of high grade brick, they decided upon the American rotary for the work. This large press, weighing 45,500 pounds, together with cast iron hardening cars which the Tift company has purchased, will give the Tift company the highest possible quality of brick.

J. F. Gressang, formerly of Wilmington, Del., an expert in the manufacture of sand lime and silica brick, has been employed by the Tift company for several months past in making marked improvements in the Tift plant and quality of brick. This company, after making changes in their factory, will produce a brick equal to the highest quality produced anywhere in this country.

J. S. Bacon, of Albany, Ga., is the efficient manager of the company, while H. H. Tift, of Tifton, Ga., is president and a "power behind the throne."

The Skaneateles Crushed Stone Company, of Skaneateles, N. Y., has been incorporated to quarry stone and deal in builders' supplies. Capital stock, \$25,000. The incorporators are: J. McLaughlin, C. H. Platt and M. F. Dillon, all of Skaneateles, N. Y.



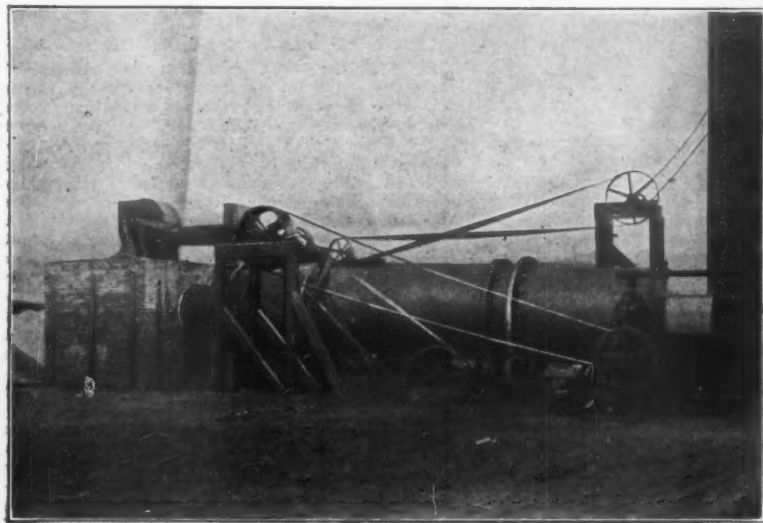
SIXTEEN MOLD SAND LIME BRICK PRESS.

DRYERS IN THE PLASTER INDUSTRY.

It is remarkable what a large number of industries have to use some sort of dryer in the preparation of the product and it is not generally recognized the tremendous progress which has been made in the design of dryers as regards capacity, durability and economy. The tremendous strides of the cement industry have of course greatly increased the demand for suitable dryers for this line of work, but there is considerable demand in other quarters and dryers are used for drying a large variety of materials, but it should be noted that substances of different physical and chemical properties require a distinct type of dryer.

In the plaster industry it is, of course, necessary to dry and heat the sand before it is used to make wall plaster. One of the best types used for this purpose is the Ruggles type, which in general has two concentric shells tied together but capable of revolving as a whole around a central axis. The material is received between the shells and passes down through to the discharge end, being heated and dried on the way by the gases which have previously passed through the inner cylinder. In this way the hottest gases do not meet the wettest material first, and this is one of the main reasons for the high efficiency of this type. It has been quite generally proved that for high economy the materials and gases should pass in opposite directions when they come in intimate contact with each other.

The Rockland & Rockport Lime Co., Brooklyn, N.



RUGGLES-COLES SAND DRYER.

Y., manufacturers of ready mixed wall plaster composed of dried sand, hydrated lime, plaster of Paris, with some clay and hair. In making this mixture and sand must necessarily be dry, but does not need to be very hot. It is the custom in plaster works to regulate the temperature of the dryer so that the sand is delivered at the discharge end at 160 degrees. During a test of this outfit, the average temperature of the exhaust was only 90 degrees Fahrenheit, which accounted for the fact that a high efficiency was obtained, the exact figures being 81.1 per cent.

At this test 398 pounds of coal were consumed every hour, and the amount of material dried was 36,460 pounds per hour.

At the Ston-Age Plaster Co., Newark, N. J., there is also an installation of a dryer of this Ruggles type, the material being fed and taken away from the dryer by suitable conveyors.

The Marion Shovel & Dredge Company, of Marion, Ohio, has purchased the entire business, including patents, designs, patterns and good-will of the Osgood Dredge Company, of Albany, N. Y., and the two companies have been consolidated under the name of the Marion-Osgood Company.

The Ruggles-Coles Engineering Co. have recently received from the Amies Road Co. an order for three small Class "F" Ruggles dryers for drying sand, used by the companies operating under the Amies Road Co.'s patents.

Officials of the Burlington road stated recently that work would soon be started on a concrete block plant at Galesburg, Ill.

A NEW OIL ENGINE.

A new design of oil engine that is very suitable for contractors' use, such as furnishing the motive power for a concrete mixer is the Blanchard Oil Engine that has just been put on the market by the Blanchard Machine Co., Cambridge, Mass. This oil engine is the latest design of Wolcott Remington who has designed successful oil engines for ten years. It is of the two cycle type, runs on kerosene and fuel oils, and uses a compression of about two hundred pounds while the ignition is effected by a hot surface.

The whole aim in designing this engine has been to make it an "ultimate cost" engine; that is, the cost has been kept reasonably low while the method of operation is such that no severe shocks are given the engine, thus reducing wear and tear, while the attendance charges are a minimum, a licensed engineer not being necessary. The compression is about twice that of the ordinary oil engine on the market and as compression means efficiency this engine has an extremely low fuel consumption, this being not more than one-tenth of a gallon per brake horsepower per hour.

On the up stroke the piston uncovers a port admitting air to the closed crank case. On the down stroke this air is compressed slightly and then is transferred through ports to the cylinder above the piston. On the next up stroke this air is compressed and just before the end of compression the fuel is atomized into the cylinder by a pump. No compressed air is used in atomizing the fuel, thus doing

away with a multi-stage high pressure air compressor and accompanying troubles and expense. The finely atomized oil is turned to a gas by the heat of compression, then instantly ignited by coming in contact with a hot plug located in the head. The plug is kept hot by the heat of the burning fuel. The pump which atomizes the oil is so driven that the oil is equally well atomized at all speeds of the engine. This is a very important point in marine engines which must be capable of running at reduced speeds. Poor atomizing of the fuel is one of the causes of incomplete combustion and consequent waste of fuel, carbon deposit and disagreeable odor of exhaust.

The superiority of the positive firing, compared to that of a gas engine, is appreciated by those who have operated gas engines.

The Blanchard Oil Engine is made in eight sizes from 8 to 100 horsepower, with one to four cylinders. It is a real low speed engine that costs no more, weighs no more, and takes up less room than a gasoline engine, while its economy is said to be better and there is no danger with the use of oil.

Catalogue on the "ultimate cost" engine will be sent upon inquiry to The Blanchard Machine Company, Cambridge, Mass.

SARCO, ITS MANY USES.

The latest booklet, "Asphalt Floors," issued by the Standard Asphalt & Rubber Co., of Chicago, contains much valuable information in regard to floor construction. It tells of the development of a satisfactory floor, why an asphalt floor, where "Sarco" is used, is the best floor; the requirements and composition of an asphalt floor and its wearing qualities.

The composition of the constituent materials is fully given, the specifications are clear and specific, while the list, showing where asphalt floors are used to great advantage, will be of assistance to the architect and contractor.

The arguments and facts are presented forcibly, without unnecessary verbiage. The matter is arranged in good order, so that one can almost catch at a glance the information desired.

The booklet is well illustrated, on enamel paper, and undoubtedly will be appreciated by the trade. Free on request.

The Lehigh Car Wheel and Axle Works have removed their western office from Denver, Colo., to the Monadnock building, San Francisco, Cal.

THE CLYDE HYDRATOR.

H. Miscampbell, of 318 St. Croix avenue, Duluth, Minn., has been exceedingly successful in manufacturing the Clyde hydrators. This machine is already well known to the trade, as it has been on the market a number of years and is in operation in various plants in different sections of the country. Mr. Miscampbell says, "Unquestionably we have a machine that for efficiency, durability and thoroughness of hydration, cannot be equaled. The only fault that can be found with the Clyde hydrators, a hardship we alone experience, is that they wear too long. In fact, there is no wear out to them. However, where we come in is that they produce a product that is satisfactory to the consumer and the lime manufacturers' business increases in consequence, making additional equipment necessary, which we quite naturally furnish." Mr. Miscampbell, in addition to being the patentee and manufacturer of the Clyde hydrators, also manufactures a concrete mixer.

In probably no other class of modern buildings is there so much attention paid to pleasing the eye as in hotel structures. The builders of a \$1,000,000 hostelry realize that the success of their venture depends quite as much on pleasing the public eye as in satisfying the public appetite or sheltering the public head.

It is interesting to note, therefore, that for this important purpose of appearances, two of the largest hotels, one the Statler hotel in Cleveland, \$2,250,000 hotel just started, and the famous Blackstone in Chicago, completed not long ago, have pinned their faith to Ricketson's mortar colors. These represent the most up-to-date development in hotel structures and in both of them Ricketson colors were specified throughout.

CLASSIFIED ADVERTISEMENTS

Advertisements will be inserted in this section at the following rates:

For one insertion.....25 cents a line
For two insertions.....45 cents a line
For three insertions.....60 cents a line

Eight words of ordinary length make one line.

Heading counts as two lines.

No display except the headings can be admitted.

Remittances should accompany the order. No extra charges for copy of paper containing the advertisement.

EMPLOYEES WANTED

WANTED.

If you are in need of or wish to sell anything which comes under any of these classifications, write us. If you have something not coming under these classifications we will create one for you.

GOOD ALL-AROUND SUPERINTENDENT

Wanted.—To manage lime plant and crusher plant in Indiana. Must be competent and understand crushing machinery and quarrying limestone. Good position for right man. State experience and salary expected.

Address "Townmill," care ROCK PRODUCTS.

MILL SUPERINTENDENT AND FOREMAN.

A first class mill-wright. One familiar with plaster mill machinery. Good position for the right man. Address AMERICAN GYPSUM CO., Port Clinton, O.

EMPLOYMENT WANTED

MANAGER.

Experienced quarry manager will consider position anywhere with strong company needing a high grade man. Highest references.

Address 822, care ROCK PRODUCTS.

FOREMAN.

A man thoroughly conversant in granite, marble and sandstone, desires a situation with firm as foreman; can furnish satisfactory references, etc.

Address 824, care ROCK PRODUCTS.

WANTED POSITION

By a man who understands concrete construction thoroughly as well as concrete machinery. Can give highest class references. Address 825, care ROCK PRODUCTS.

SUPERINTENDENT OR MANAGER.

Capable middle aged man, holding position with prominent brick machinery manufacturing concern, wants position as superintendent or manager of sand lime brick plant. 18 years of experience here and abroad, with all known machinery systems and methods. Best references. Address 818, care ROCK PRODUCTS.

SALESMAN—BUILDING MATERIAL.

A reliable and successful salesman in building material, well acquainted in N. Y. City and vicinity, desires position with responsible firm; highest references from last employers, having had twelve years in their service; salary or commission. Address
E. G. BONNEAU, 15 Shephard Ave., Newark, N. J.

PLANT FOR SALE

CRUSHING PLANT

For Sale—No. 6 crushing plant complete with crusher, elevator, screens, power house equipment, etc. In central South Carolina, with access to best of southern markets. High grade granite for rip-rap, ballast, concrete material, etc. Plant can be seen in operation anytime. For particulars and prices write to
No. 826, care ROCK PRODUCTS.

MATERIAL FOR SALE

RUBBER CONVEYOR BELT.

Two pieces rubber conveyor belt, each 215 feet long, 18 inches wide, 5 ply and 1/4" extra rubber on one side. New and at factory in Chicago. Make us an offer.
A. M. BLODGETT CONSTRUCTION CO., Kansas City, Mo.

MATERIAL WANTED

WANTED.

In order to settle a case in court for one of our subscribers, we would like to secure a copy of the July 22d, 1909, issue of Rock Products. Anyone having such a copy in his possession kindly mail the same to our office, stating price desired.
ROCK PRODUCTS, 537 S. Dearborn St., Chicago, Ill.

BUSINESS OPPORTUNITIES

PATENTS SECURED FOR INVENTIONS.

C. L. Parker, ex-examiner U. S. patent office, 956 G St., Washington, D. C. Write for inventor's handbook.

Continuous and Double Air Space Building Blocks



FRANCIS MACHINERY CO., 4 Market St., St. Louis, Mo.



Anchor Brand Colors

For Mortar, Cement and Brick
Brown, Black, Red and Buff
Strongest and Most Durable

Manufactured by **C. K. Williams & Co.**
Correspondence Solicited Easton, Pa., U. S. A.

FUTURE PROSPECTS

Want to correspond with parties that can finance a good sand, gravel and crushed stone proposition. Good prices and good future prospects.
Answer 823, care ROCK PRODUCTS.

MACHINERY WANTED

SAND LIME BRICK PLANT.

Wanted—Machinery for two press plant. Must be in good condition. Give particulars and price.
H. L. CONLIN, East Toronto, Ont., Can.

MACHINERY FOR SALE

CRUSHER.

One No. 8 style "K" Gates or McCully Crusher. Quote lowest price for cash and state condition of same.
Address 819, care ROCK PRODUCTS.

CRUSHER

For Sale—One No. 2 "D" Gyratory, Gates Crusher. Cost \$600.00 three years ago. Have no further use for same. Make us an offer.
ROCHESTER COMPOSITE BRICK CO., 64 Clinton Ave., North Rochester, N. Y.

HEAVY MACHINE LATHE

For Sale—Good as new for stone work, with power cross and longitudinal feed. Will swing 38" diameter and take 20 feet in length.
Address J. M. BELLINGER, Mohawk, N. Y., or O. W. ALSTON, Binghamton, N. Y.

TWO WEST TUBE PULVERIZERS.

One 24"x5'6" with gear and pinion complete, excepting clutch pulley and one 18"x5'6" gear and pinion complete with clutch pulley disassembled in good condition. Price exceptionally low to quick buyer.
STANLEY DOGGETT, 101 Beekman St., New York City.

SAND DRYER

For Sale—Rotary Sand Dryer, manufactured by the American Process Co., 62 William St., N. Y. In "A No. 1" condition. Will sell at a bargain, as we have no further use for it. Make us an offer.
ROCHESTER COMPOSITE BRICK CO., 64 Clinton Ave., North Rochester, N. Y.

TWO DUNN & CO. BLOCK MACHINES

For sale, with 600 pallets; one brick machine; also set of rolls for making galvanized iron molds; all in good condition. Will sell entire outfit for \$125.00.
Address PLANO CONCRETE CO., Plano, Ill.

Patents and Trade-Marks

Personal, Expert Services. :: Fair and Reasonable Rates. :: 25 Years Before United States Patent Office. :: :: ::

C. T. BELT, Warder Bldg., Washington, D. C

FOR THE WALLS OF THE WEST

USE NEPHI PLASTER THE DEPENDABLE BRAND

For sale by the most prosperous dealers in every community throughout the Pacific Coast and Rocky mountain states. Highest grade Hardwall, casting, finishing, dental and land plaster. Used in the highest class structures throughout the west for more than twenty years. Time has told the story. Hard, permanent, enduring. Made from the largest and purest deposit of gypsum in the world. Write for free booklet.

NEPHI PLASTER & MANUFACTURING CO.
Main office, Boston Building, SALT LAKE CITY, UTAH



THEW SHOVEL.

For Sale—No. 3, overhauled, first class shape. Also narrow and standard gauge locomotives. Address Southern Iron & Equipment Co., Atlanta, Ga.

MACHINERY BARGAINS

Special Prices on These if Sold DURING DECEMBER

Thew Full Circle Traction Shovel size No. 0. Bucyrus 50 ton 1 1/2 yd. Steam Shovel. Vulcan 95 ton 3 1/2 yd. Steam Shovel. Browning 10 to 15 ton Locomotive Crane: 38-foot boom. Owen 1 yd. Clam Shell Bucket. Hayward 1 yd. Orange Peel Bucket. Gates Nos. 1, 2, 3, 5, 6 Gyratory Crushers. Austin Nos. 2 and 8 Gyratory Crushers. Porter 10x16 Saddle Tank Standard Gauge Locomotive. Baldwin 14x22 Switching Engine and Tender: 24 ton. Large Stock of Steam Pumps, Air Compressors, Boilers, Engines, Dump Cars, and Light Rail.

We are moving our storage warehouse and yards: desire to reduce stock. Now is the time to buy. All our goods are guaranteed by us.

WILLIS SHAW MACHINERY CO.
39 So. La Salle Street
CHICAGO, ILL.

MANSFIELD ENGINE FOR SALE

16x24, complete in every detail, ready for immediate operation without expense for repairs or replacements. No reasonable offer refused.

OHIO CLAY PRODUCTS COMPANY

Salineville, :: :: :: Ohio

DR. OTTO SCHOTT

Consulting Engineer and German Cement Expert

Office: Fifth Avenue Bldg., Madison Square, New York

CURRIE & McLAREN CONSULTING ENGINEERS

N. W. Cor. 12th and Spruce Sts., Philadelphia, Pa.

PLANTS DESIGNED OR REMODELED

F. A. Jones, M. E. Gypsum Specialist

Consulting, Mechanical and Chemical Engineer, in Designing, Construction and Operation of Plaster Mills, (Kettle or Rotary Process), Elevating, Conveying and Crushing, Mechanical Drying, (Kiln or Rotary) and Hydrating Plants, Power Houses, Pumping Stations and Water Powers.

Examination, Tests, Analysis and Reports. Plans, Specifications and Superintendence of Construction.

311-C FEDERAL BLDG.
YOUNGSTOWN, OHIO.

Stone Crushing and Power Plants.

DESIGNED AND ERECTED
Special reports made on Quarries and Plants not producing results.

PRESTON K. YATES Consulting Engineer 30 CHURCH ST. N. Y. C.

THE HENRY MARTIN BRICK MACHINE MFG. CO.

LANCASTER, PENNA.

ROCK CRUSHING MACHINERY
BRICK-MAKING MACHINERY
CLAY - WORKING APPLIANCES
CEMENT BRICK MACHINERY
SAND GRINDING MACHINERY
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QUARRIES



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537 South Dearborn Street, Chicago, Ill.

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BETWEEN

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CHICAGO

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Write for our May Bulletin of Bargains in Heavy Equipment Before You Buy. A Postal-Card Brings It.

MARSH COMPANY,

971 Old Colony Building,

CHICAGO, ILLINOIS

ROCK PRODUCTS

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Urschel Bates Valve Bag Co.
West Jersey Bag Co., The

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Miller & Co., Clifford L.

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Traylor Engineering Co.

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Sallabury & Co., W. H.
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Forever;
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BUILD WITH CONCRETE HOLLOW TILES AND ELIMINATE REPAIR BILLS

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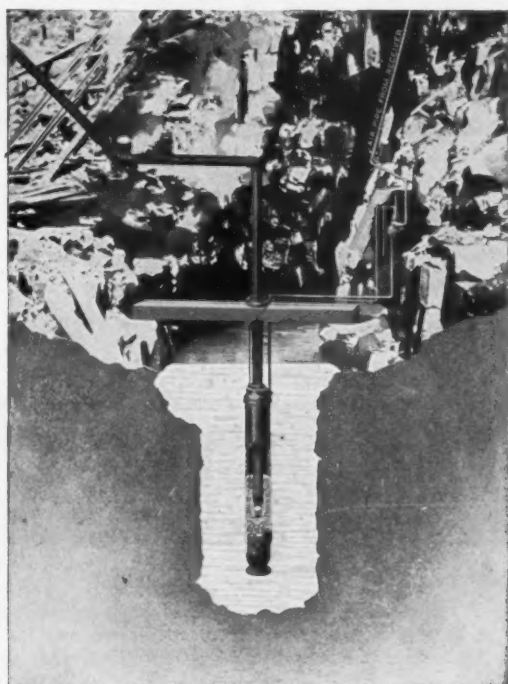
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FLOATLESS SUMP PUMP

FOR

Mine and Quarry Drainage

Operated by Compressed Air

No machined Pistons or Cylinders to wear out. Made of Standard Pipe or brass; galvanized or coated with acid-resisting paint.

Connect with existing pipe lines and "turn on the air."

Requires no oiling or attention

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Single Unit shown in illustration.

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Detailed information upon receipt of your pumping conditions.

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90 West Street, New York City



TRIANGLE MESH CONCRETE REINFORCEMENT

MADE in rolls. Either solid or stranded tension members. A steel fabric of great strength, reinforcing in every direction.

"Engineer's Handbook of Concrete Reinforcement" furnished free upon request.

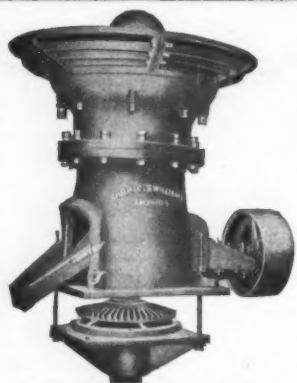
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KENNEDY GYRATORY CRUSHER

Reduce the Cost of Crushed Stone

— by using —

CHALMERS & WILLIAMS CRUSHERS

We can show these crushers in operation for two years, which, during that time have not cost one cent for repairs.

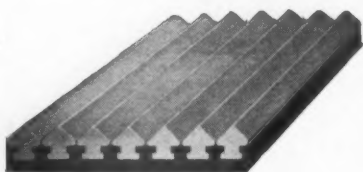
This crusher is the only crusher made with a ball and socket self aligning eccentric which relieves undue strain and reduces the amount of power required to operate.

Those who have investigated, have bought. Why don't you? Ask for catalog L-4.

We manufacture this crusher under exclusive contract.

CHALMERS & WILLIAMS - - **Chicago Heights, Ill.**

A Tempered Steel Jaw Plate for Blake Type Crushers



Canda Tempered Steel Crusher Jaw Plate

Patented March 31, 1908

☞ The Canda Tempered Steel Jaw Plate for Blake Crushers is composed of Forged and Rolled Chrome Steel Bars, cast-welded and also mechanically interlocked into a backing of tough steel—and the wearing face is tempered to extreme hardness. We are equipped to supply both corrugated and smooth face plates for all sizes and makes of Blake Crushers.

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☞ Our products in this line are sold with our special guarantee that they *will wear longer, give better satisfaction and, at our price, prove more economical than any others now on the market.*

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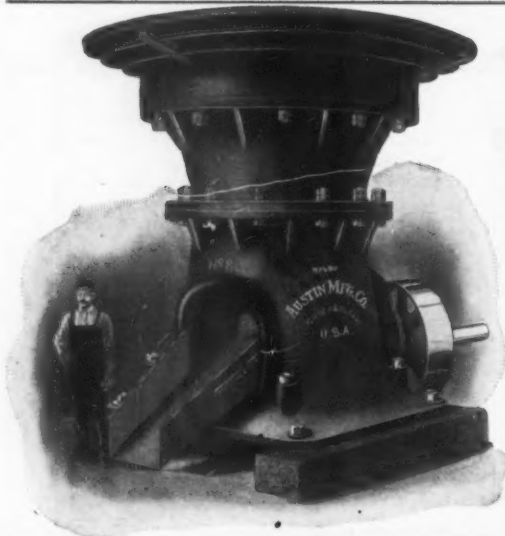
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The only self lubricating Crusher.

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Simple construction, correct design.

Thousands in use.

Plans and specifications furnished for any sized plant.

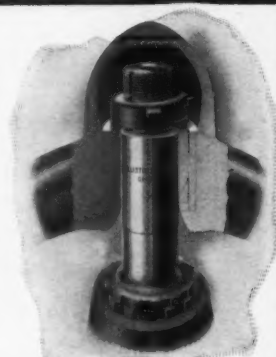
Send for Catalogue No. 17.

All experienced users recognize that the efficiency and durability of the suspension bearing as applied to Gyratory Crushers, depends upon locating the bearing at the point of least gyration or movement of the main shaft.

A perfect suspension can be made only by locating the bearing at the point where there is no movement of the shaft. That being a mechanical impossibility it follows that superiority is obtained in fixing the bearing at the point of least gyration of the shaft.

As the accompanying cut will show, the movement of the shaft at the point of suspension in the Austin Crusher is reduced to the minimum and practically eliminated. Consequently the highest possible degree of efficiency and durability is obtained.

Austin Manufacturing Co., Chicago
Mussens Ltd., Montreal, Can., Canadian Sales Agents.



New York City Office
1682 FULTON BUILDING
Hudson Terminal



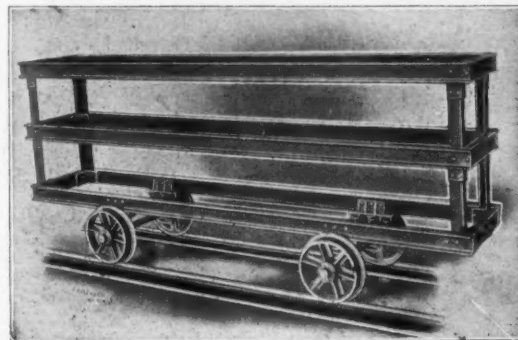
"KENT" CONTINUOUS MIXER

"The Mixer that measures and Mixes"

"You fill the Hopper, the Mixer does the rest"

Simple, reliable, economical, durable and moderate in price

Write for Catalogue and Prices to
The Kent Machine Co.
306 N. Water St., Kent, O.



The "KENT" Block Cars, Transfer Cars, etc.

Tell 'em you saw it in ROCK PRODUCTS

The Gardner Crusher Disintegrator and Pulverizer

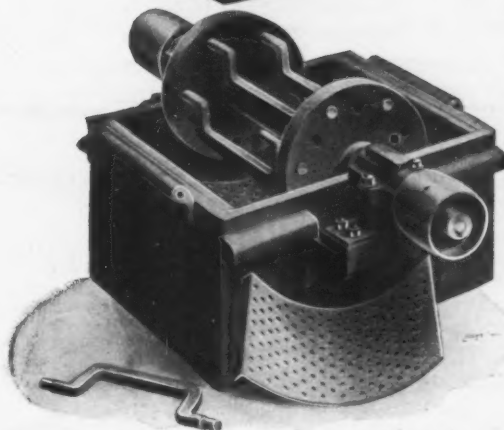
The great advantages of our CRUSHER are the following:

High Productivity	Low Motive Power
Small Space Occupied	Strong Construction
Nominal Wear	Any Desired Fineness
Moderate Prices	

**The Gardner Crusher
Disintegrator
and
Pulverizer**

is adapted for

**Cement, Plaster,
Quartz, Pyrites, Lime,
Pozzolana Earth,
Blast Furnace
Cinders,
Calcareous Stones,
Porphyry, Granite,
Emory, Corundum,
Saggar from
Potteries,
Scoria, Hammerslag,
Construction and
Foundry Sand,
Phosphates, Ochres,
Bones, Sandstone,
Silex, Bricks, Coal,
Pitch, Glass, Enamels**



AN IDEAL PREPARATOR FOR THE TUBE MILL.

TRIALS

In order to give every facility to our customers, we have installed a Crusher for trials at our plant at 532 West 34th Street, New York City. You have only to send us a sample of your crude material and a sample of what you require when crushed. You should also specify the quantity that you desire per hour.

Our experienced engineer is at your disposal for any further explanation. *Send For Catalogue.*

**The Gardner Crusher
Disintegrator
and
Pulverizer**

has these advantages:

Is the most economical of all Crushers or Pulverizers.

Its price is very moderate.

Its capacity for pulverizing is enormous compared to its size and power required.

The Gardner Crusher requires no special foundations and can be put up anywhere.

Any fineness required can be obtained by merely changing the screens.

Its weight is very light, so the crusher can be sent to any remote country.

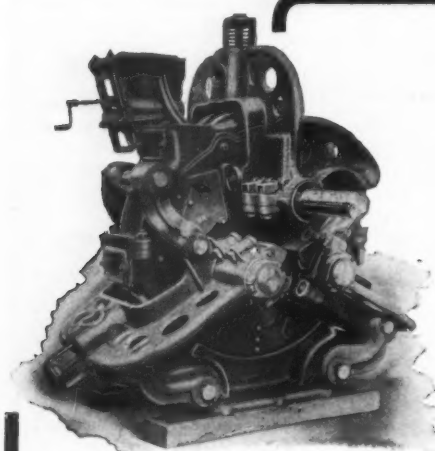
With the Gardner Crusher, in some cases, the complete equipment of a crushing plant will be the Gardner Crusher and the tube mill. With this kind of an installation the larger machines No. 2 or No. 3 would be used, eliminating the preliminary breaking machines.

GARDNER CRUSHER CO.

532 WEST 34th STREET

NEW YORK CITY, U. S. A.

Tell 'em you saw it in ROCK PRODUCTS



MAXECON

Means MAXimum of ECONomy

Years of experience with the assistance of our hundreds of customers has found THE SOLUTION OF GRINDING HARD MATERIALS. The MAXECON PULVERIZER combines highest EFFICIENCY, greatest DURABILITY and assured RELIABILITY. Uses the LEAST HORSE POWER per capacity. Embodies the features of our Kent Mill with improvements that make it MAXECON.

WE DO NOT CLAIM ALL of the CREDIT for this achievement

We have enjoyed the valuable suggestions of the engineers of the Universal Portland Cement Co. (U. S. Steel Corp.), Sandusky P. C. Co., Chicago Portland C. Co., Marquette Cement Mfg. Co., Western P. C. Co., Cowham Engineering Co., Ironton P. C. Co., Alpena P. C. Co. Castalia P. C. Co., Pennsylvania P. C. Co., and many other patrons.

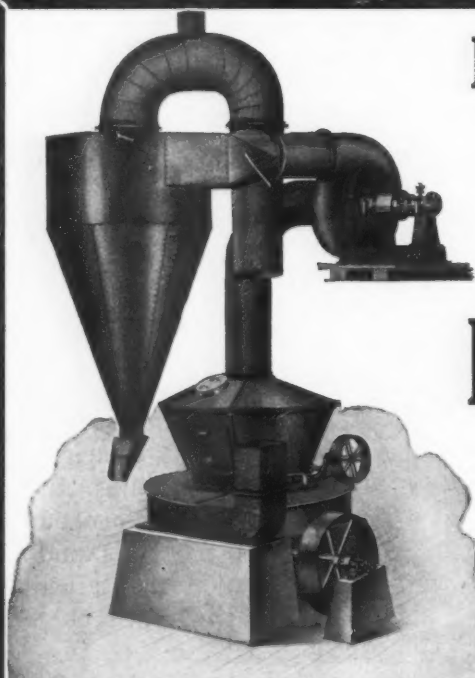
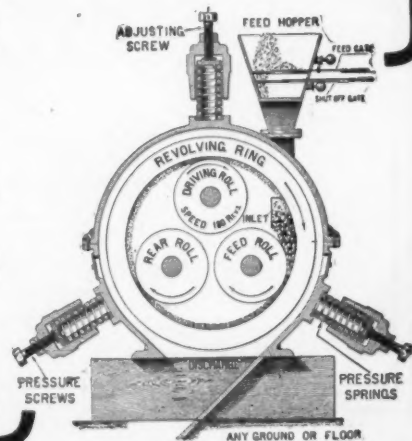
THE RING WOBBLER

The FREE WOBBLING POUNDING RING instantly and automatically ADAPTS its position to the variations of work.

Its GRINDING ACTION is DIFFERENT than any other; besides the STRAIGHT rolling action of the rolls, the SIDE to SIDE motion of the ring makes the material subject to TWO crushing forces and DOUBLE OUTPUT results.

KENT MILL CO.

170 BROADWAY, NEW YORK CITY
LONDON, W. C., 31 HIGH HOLBORN
CHARLOTTENBURG 5, WINDSCHEID STRASSE 31, BERLIN



Let This Pulverizing Mill Save You 65% in Grinding Coal

A certain cement manufacturer used to grind his coal—13000 tons a year—at a cost of 33.6 cents per ton with a Ball and Hammer Mill. Now it costs only 12½ cents a ton.

A Modern Raymond Pulverizing Air Separating System effected this saving of 65%, or \$2743.00 in one year, almost enough to pay for itself.

RAYMOND PULVERIZING AIR SEPARATING SYSTEM

May do as well for you. Please communicate with us and let us see if we can work out any saving for you.

The Raymond System grinds materials finer than any other, thus enabling many manufacturers to produce a better finished product and at the same time greatly increasing the capacity of the plant.

The Raymond System effects much saving in space—requires the least power to operate and little cost of maintenance. No reels, screens or bolters are used, thus saving expensive replacements, repairs and loss of time.

In many industries we do away with preliminary crushers and elevating and conveying machinery because the separating is done by air suction. Often we save several handlings of material and, always we keep the pulverized product confined within the system, thus preventing waste of product, the choking of workmen and at the same time making for cleanliness in the grinding room.

The Raymond System can be adjusted to any desired mesh with the assurance that it will always deliver a uniform product of the required fineness.

All Raymond Systems are installed on a guarantee that they will do what we claim.

We design special machinery and methods for Pulverizing, Grinding, Separating and Conveying all powdered products. We manufacture Automatic Pulverizers, Roller Mills, Vacuum Air Separators, Crushers, Special Exhaust Fans and Dust Collectors.

Send for our Book "I" which explains in detail what our system is and how and where it may be used.

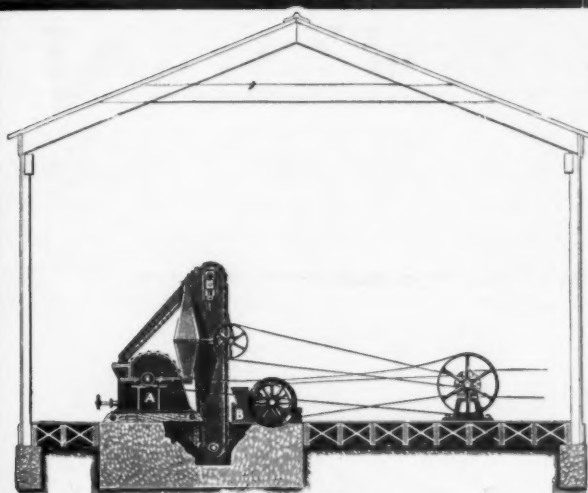
Read this book and you may find the way to divert some items from the expense account into the dividend account.

Raymond Bros. Impact Pulverizer Co., 577 Laflin Street, Chicago, Ill.

PLEASE CUT OUT THIS REMINDER

To write Raymond Bros. Impact Pulverizer Co., 577 Laflin St., Chicago, for their Book "I" on Modern Methods of Pulverization and Air Separation.

Tell 'em you saw it in ROCK PRODUCTS



Stationary Plant

Get Into the Game

GRIND YOUR LIMESTONE SCREENINGS AND MAKE LIMESTONE FERTILIZER

What Is Now a Dead Loss to Some Quarrymen
Can Be Turned Into Good Profits

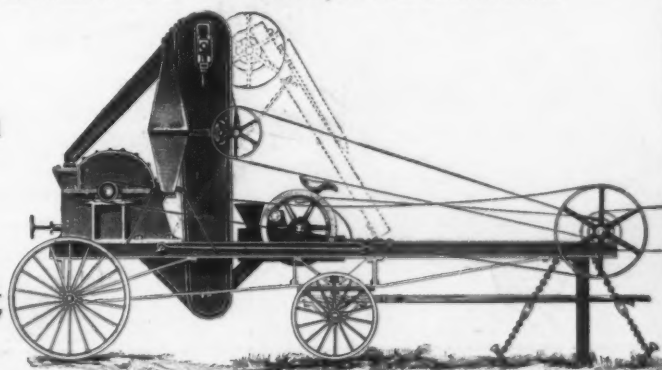
WE FURNISH COMPLETE PLANTS OF ANY CAPACITY DESIRED
Manufactured and Licensed under 87 Separate and Distinct Patents

We now have over 30 plants in operation

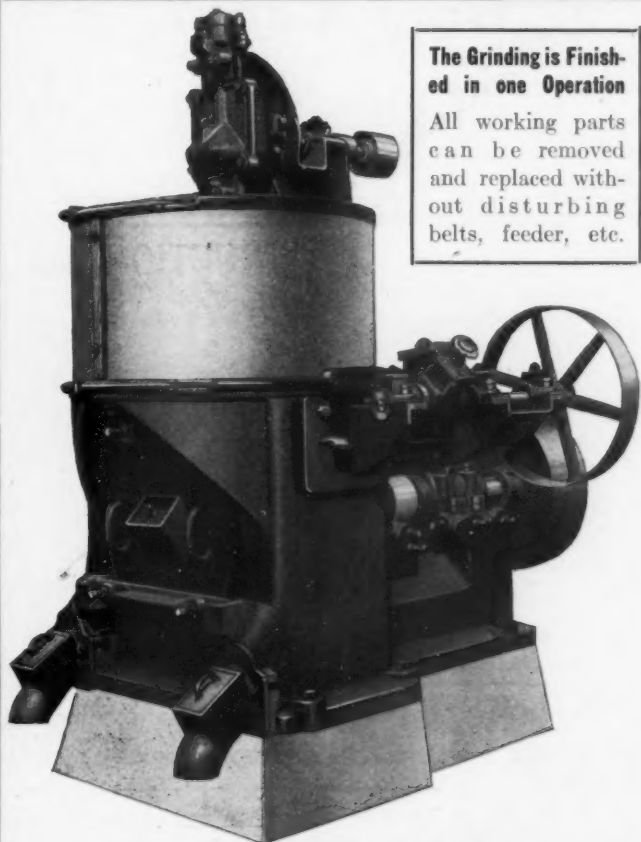
BULLETIN NO. 4 EXPLAINS THE
PROPOSITION

**The Williams Pat. Crusher &
Pulv. Co.**

ST. LOUIS: 2705 N. Broadway
CHICAGO: Old Colony Bldg.
SAN FRANCISCO: 428 Monadnock Bldg.



Portable Plant



Bonnot Pulverizer

The Grinding is Finish-
ed in one Operation

All working parts
can be removed
and replaced with-
out disturbing
belts, feeder, etc.

SAVE MONEY

BY

PULVERIZING YOUR LIMESTONE SCREENINGS TO MAKE LIMESTONE FERTILIZER

Finely ground limestone is rapidly coming into
favor as a fertilizer. There is also a market
for it for other purposes.

THE BONNOT PULVERIZER IS PARTIC-
ULARLY ADAPTED TO THAT WORK—
PUT IN YOUR SCREENINGS AND IT IS
DISCHARGED AS FINISHED PRODUCT.

IT GRINDS AND SCREENS

No. 4 CATALOG TELLS ABOUT IT.

THE BONNOT COMPANY

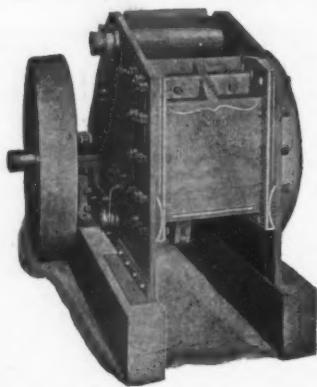
909 N. Y. Life Bldg.
KANSAS CITY, MO.

CANTON, OHIO

Tell 'em you saw it in ROCK PRODUCTS

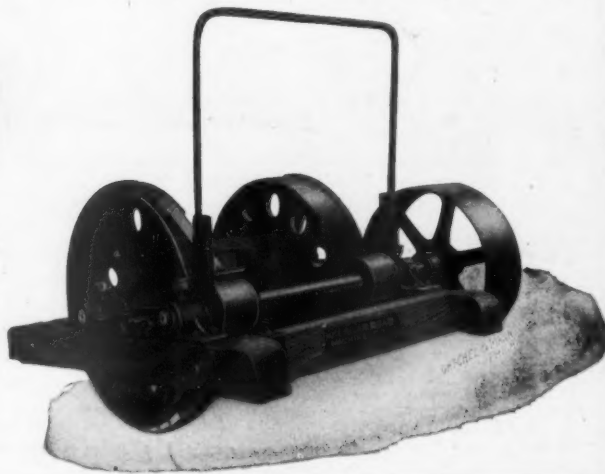
Increase the Output and Efficiency of Your Quarry

By using CHAMPION Rock Crushers, Elevators, Screens, Dump Cars, Hoisting Drums, Wire Cable, Conveyors, Bin Chutes, Engines and Boilers. Everything for the quarryman furnished at right prices. Our Dump Cars are Durable and Economical. Made in two sizes.

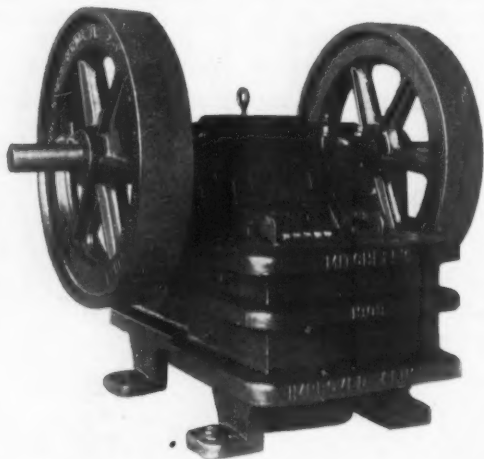


Champion Steel Rock Crushers are made in six sizes, from 75 to 600 tons daily capacity. We design and equip quarry plants of any capacity. Our Crushers do more work at less cost for repairs than any others. Catalog will interest you.

Count on quality when you consider Champion Quarry Machinery. We aim to furnish nothing but the best. Our winding drum is a low-priced, durable and economical appliance for drawing material from the quarry to the Crusher. Powerful and always to be depended upon.



The Good Roads Machinery Company, Kennett Square, Pa.



There Are Reasons for Mitchell Crusher Superiority

Study the cross sectional view of the Mitchell Crusher and you will see at a glance why it is different from any other crushing machine. The motion of the movable jaw tends to produce a more uniform product with a very great saving in power. The crusher is adjusted in a jiffy to produce material in any size from 2 1/2" even as fine as sand.

There are only 14 parts which greatly eliminates the possibility of wear and breakage. We can show you where you can profit by using a Mitchell Crusher.

State your proposition clearly. Let us know what you have to crush, how fine you want to crush it, and what capacity you can use in a 10 hour day.

You will be glad to have our 60-page catalog describing our 15 sizes. Send for catalog 7 R.

EUREKA STONE AND ORE CRUSHER CO.
CEDAR RAPIDS, IOWA

Want A Job?

Use Our Classified Section

SEE PAGES 54-55

GOOD ROADS CONSTRUCTION CO.

General Offices, Exchange Bldg., Memphis, Tenn.

Our Quarry Facilities are of the Best.

We build municipal street work, turnpikes and give attention to all construction work of a similar character. Our organization is backed by twenty-five years experience, and we are in a position to furnish specifications and estimates promptly. Individuals, Corporations or Municipal authorities are invited to correspond with us.

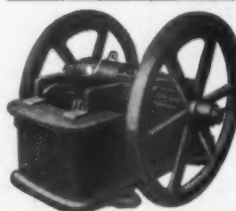
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SPECIALISTS IN

Engineering Cement Works

AND

Cement Making Machinery



Lewistown Foundry & Machine Co.
LEWISTOWN, PA.

Builders of heavy duty crushers and glass sand machinery. Glass sand plants equipped complete.

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Tell 'em you saw it in ROCK PRODUCTS

Sand and Gravel, Washed and Screened,

Can Now Be Placed in Separate Cars Cheaper Than You Used to Load Bank-Run Gravel, If You Use Modern Equipment.

Every owner of a gravel pit, every concrete man who has sand and gravel on his property, can make this material show a good profit by so handling it as to make it good material for concrete work. It's all in the handling. If you can dig the gravel economically, wash it free from clay, loam and other impurities, and deliver it with sand and gravel screened apart, you can command a better price.



Improved Automatic Elevators

Will Dig, Wash, Screen and Load Sand and Gravel for Less Money Than Any Other Known Device.

The machine shown here is working on a bank of gravel, cleaning the face. In operation, the elevator, which runs by its own power, stands on one track, discharging sand into cars on the next track and gravel into cars on a third track. Material may be delivered in this way, or bank run may be loaded into the cars.

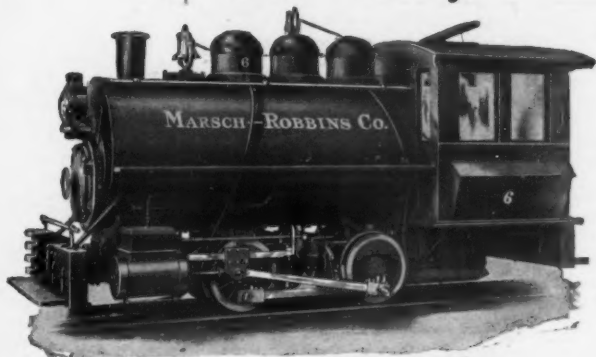
Our engineer, W. D. Beers, will be present, with blue prints and photos of our machine, at the preliminary meeting of the Sand and Gravel Producers, which is to be held at the Auditorium Hotel, Chicago, December 15-16.

Get Our Booklet on the Economical Production of Sand and Gravel
Copy Sent to Any Address

SHOEMAKER & CASPARIS
NEWCOMERSTOWN, OHIO

Any One Interested in Excavating and Screening Sand and Gravel for Concrete Work, Please Address:
W. D. Beers, Engineer, for Shoemaker & Casparis, Room 701, 537 So. Dearborn St., Chicago, Ill.

Do You Have Cars to Haul?
The Davenport Locomotive
Will Save Money



Special Designs for Special Purposes
Any Size, Any Gauge, Any Weight
Write for Prices and Particulars
DAVENPORT LOCOMOTIVE WORKS
DAVENPORT, IOWA

BRANCH OFFICES:
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Seattle, 617 Western Ave. Minneapolis, 107 3d Ave. No.
F. H. Hopkins & Co., Montreal, Que., Canadian Representatives

GRAVEL WASHING PLANTS



Stone Crushing Cement and Power Plants

J. C. Buckbee Company, Engineers, CHICAGO

FARREL ORE AND ROCK CRUSHER

USED IN ALL PARTS OF THE WORLD—LARGE RECEIVING CAPACITY—SPECIALLY DESIGNED AND CONSTRUCTED FOR HARDEST KIND OF WORK
COMPLETE CRUSHING PLANTS OUR SPECIALTY

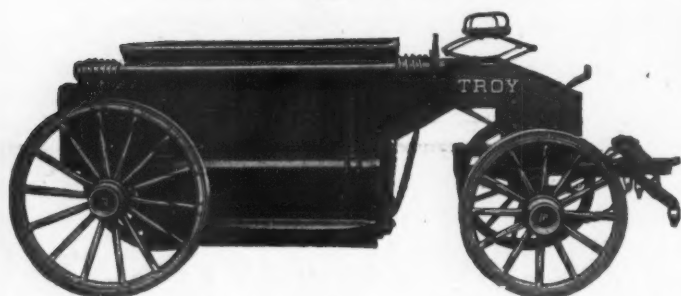
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EARLE C. BACON, ENGINEER.

FARREL FOUNDRY & MACHINE CO. HAVEMEYER BUILDING, NEW YORK

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Part of Scientific Management



is scientific buying—a great big part too. Take dump wagons for instance. There are dozens of makes on the market. Only ONE has been actually tested out from every possible angle. That is the TROY. Let us prove it to you—you can cut those hauling costs. Get Catalog 2P.

THE TROY WAGON WORKS CO.

101 E. Race Street, Troy, Ohio

TRUE MANGANESE STEEL CASTINGS

**Wear Longer
Withstand Shock Better**

FOR WEARING PARTS OF:

**CEMENT MILL MACHINERY, JAW AND GYRATORY CRUSHERS,
STEAM SHOVELS, ETC.**

Also, Open Hearth Steel Castings and Alloys—Vanadium, Nickel, Etc.

AMERICAN STEEL FOUNDRIES
NEW YORK PITTSBURG CHICAGO ST. LOUIS

Nuttall Gearing

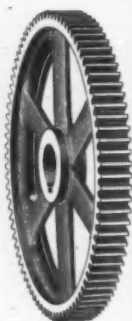
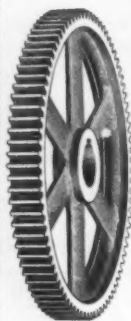
**will positively reduce the amount
you are spending for power**

Tell us your power transmission troubles and our experienced engineers will show you where you can save money in your plant. Nuttall Gears are designed especially for Clay-working Machinery and will give you the same excellent service they are giving thousands of satisfied Nuttall Gear users all over the world.

We buy them back if not as represented

Nuttall--Pittsburgh

When in a hurry, wire us.



CALDWELL MACHINERY

FOR HANDLING

**Stone, Gravel, Sand,
Lime, Cement, Etc.**

**Screw and Belt Conveyors.
Steel Elevator Casings and
Buckets, Gears, Cut and
Cast Teeth, Link Chain Belt-
ing, Shafting, Pulleys,
Sprocket Wheels, Etc.**

SEND FOR CATALOG No. 34

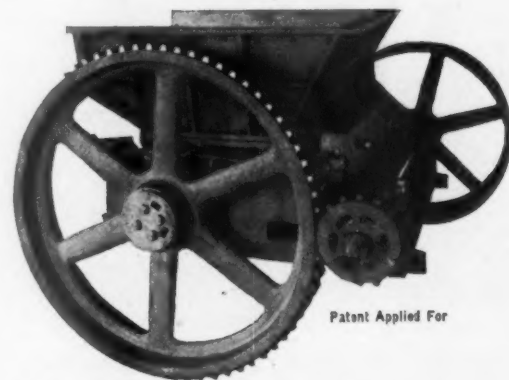
H. W. CALDWELL & SON CO.

CHICAGO

Western Ave., 17th to 18th Sts.

NEW YORK

Hudson Terminal, 50 Church St.



Patent Applied For

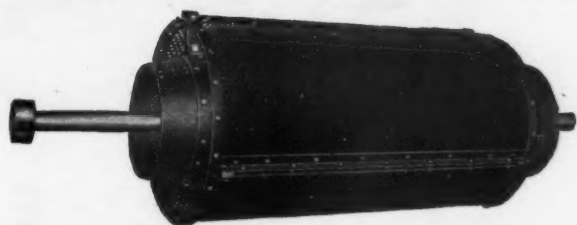
SINGLE ROLL CRUSHERS

For Limestone, Phosphate Rock and Cinder, Etc. Any Capacity from 5 to 500 Tons per Hour. More Easily Fed, Makes Less Fines than Either a Jaw or Gyratory Crusher. Information and Prices for the asking.

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**For Stone, Gravel, Ore, Coal and Other Materials
Rotary, Bar and Shaker Screens**

We make screens of every sort, size, shape and kind for work of every description. Designs are extremely varied. Submit us a statement of your requirements and we will make up specifications and estimates.

Write our nearest office.

THE WEBSTER M'F'G COMPANY

NEW YORK
88-90 Reade Street

TIFFIN, O.

CHICAGO
815-817 Fisher Bldg

LOOK! LISTEN!

LEVIATHAN SPECIAL-BLACK CONVEYOR BELTING

is a new belt that has been on the market but a few months. The demand for it has been so extraordinary that we have not up to the present time been able to meet it.

With our new factory

just finished for the exclusive manufacture of this belt, we are now in position to take all orders, and make prompt shipment. This belt is the wonder of the age for use in stone, sand and gravel plants.

Think of it!

A canvas belt of the LEVIATHAN standard with a practically indestructible $\frac{1}{8}$ inch coating on its face to resist the wear and tear of rough materials. Write us for further particulars.

MAIN BELTING CO.

PHILADELPHIA CHICAGO NEW YORK BOSTON
PITTSBURG SEATTLE

For Sale in Canada by the Main Belting Co. of Canada, Limited,
41 Common Street, Montreal.

"It looks good on the face of it."

IN THE FUTURE!



This edge of the
GANDY
BELT will be painted GREEN

The rest of the belt will remain red as before, and every roll of belting will continue to bear our brand THE GANDY BELT, and our trade mark a coil of belt and a bale of cotton laid across it, printed upon the belt at intervals throughout the entire length of the roll, the same as heretofore. We do this so that you will recognize at a glance THE GANDY BELT from the many imitations now on the market. Remember every GANDY BELT is guaranteed to give satisfaction, and it is not a GANDY BELT unless one edge is painted green, and the belt bears the brand THE GANDY BELT and the trade mark a coil of belt and a bale of cotton laid across it.

Look for the belt with the Green Edge.

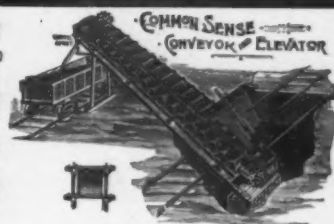
Let us send you sample and Booklet. Write today.

GANDY BELTING COMPANY

744 W. Pratt St., Baltimore, Md. New York Office, 88-90 Reade St.



Send for Catalog 25



**THE GENERAL CRUSHED
STONE CO.,**

So. Bethlehem, Pennsylvania,

have been using one of our Common Sense Elevators for six years—
capacity 400 tons an hour.

THE C. O. BARTLETT & SNOW CO. CLEVELAND OHIO

"R. F. & C." Solid Woven Rubber Belt

Eliminates every rubber belt defect. Send for pamphlet
"A Wireless On Rubber Belting."

W. H. SALISBURY & CO., Dept. R

CHICAGO

Established 1855

ILLINOIS

FOR IMMEDIATE SHIPMENT NEW AND REBUILT MACHINERY FOR
CONTRACTORS AND QUARRY EQUIPMENT.

Two Rebuilt Western and Two Rebuilt New Era Elevating Graders, good as new. Twenty Rebuilt Western Wagons. Three 13-Ton Stone Bins. Two No. 2 Gates Crushers "D" Style. Rebuilt Jaw Crushers and Reversible Road Machines of Standard Makes.

HEADQUARTERS FOR Concrete Mixers, Wheelbarrows, Gasoline Engines, Gyrratory and Jaw Crushers, Cars, Hoists and everything in Quarry Equipment.

Write us for catalog and prices.

THE WILLIAMS CONTRACTORS' SUPPLY CO., Columbus, Ohio.

Tell 'em you saw it in ROCK PRODUCTS

TISCO
MANGANESE STEEL
CHAIN

for conveying, elevating and transmission purposes. Detachable, Combination, "800 Series" and Special Types. The close grain and combination of hardness and toughness give it wearing qualities combined with strength unequalled in any other material.

Wearing Parts for Crushing and Grinding Machinery
Send for Chain Bulletin 113. Address Dept. E.

TAYLOR IRON & STEEL CO.
 High Bridge, New Jersey



TITAN MANGANESE STEEL


Unequalled for wearing parts of Jaw Crushers, Gyratory Crushers, Cement Machinery, Coal Breaking Machinery, Steam Shovels and Dredges. *Send us your inquiries.*

TITAN STEEL CASTING CO.
 NEWARK, NEW JERSEY

CHICAGO RICHMOND SAN FRANCISCO BOSTON

Newaygo Screen

Price
\$285.00



Screens Everything Screenable
 FROM 4 TO 200 MESH.

Cannot shake itself to pieces — One to four products from a single separator.

HUNDREDS IN USE.

78 by one Company — 60 by another — 17 by another — 17, 15, 11, 9, 8 by others. These orders and re-orders show what users think of Newaygo Screens.

Send for "Sale or Return Offer" and Catalog

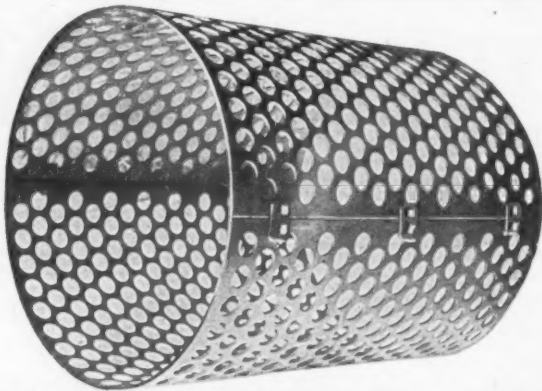
STURTEVANT MILL CO., BOSTON, MASS.

SCREENS

If you are interested in
Perforated Screens
 and
**Have Tried All the Rest,
 Why Not Try the Best?**

Let us supply you with our screens, which are made from a special Hard Steel, especially adapted for stone, ore, gravel, sand, etc.

We Solicit Your Inquiries



BECKLEY PERFORATING CO., Garwood, N. J.

IT WILL PAY YOU TO INVESTIGATE
PRICE, MATERIAL and
DELIVERIES Are Right

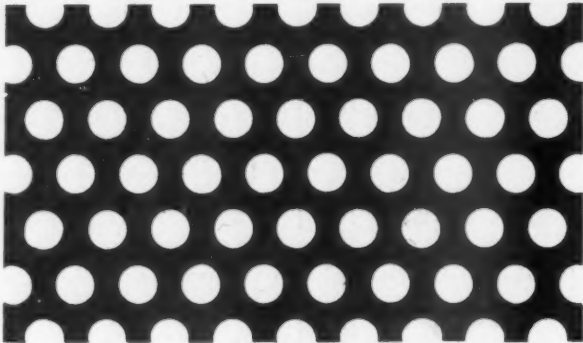
Revolving Screens, Suspension Screens
 Trunion Screens, Shaker Screens
 Hexagonal Screens, Jump Screens

If you don't see the screen you are looking for here, ask for it. We make it.

Send for Circular

PERFORATED METALS

Our Perforated Products have a reputation for accuracy and general high quality, our deliveries are prompt, and prices the lowest. This is why we number among our customers so many of the largest users of Perforated Metals throughout the United States.



CROSS ENGINEERING CO.
 CARBONDALE, PA.

SCREENS
 OF EVERY DESCRIPTION
 FOR
 STONE GRAVEL CEMENT
 COAL COKE
 ETC, ETC.

SPECIAL HIGH CARBON STEEL

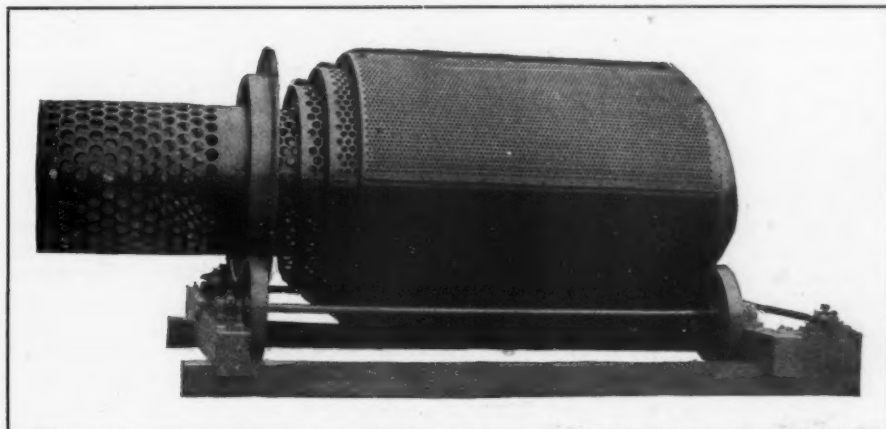
Adapted for the above operations, will be furnished at no greater cost than standard steel plates.

SEND FOR ILLUSTRATED CATALOG

WE SOLICIT YOUR INQUIRIES

Tell 'em you saw it in ROCK PRODUCTS

JOHN O'LAUGHLIN'S SCREEN



made solely by Johnston & Chapman, is the

ONLY SCREEN

on the market for wide-awake quarry-men and miners, who want to separate crushed granite, limestone or other minerals, gravel, sand, coal or coke. It will soon earn its cost in saving of repairs, and maintenance, and reduced power, and will do more and cleaner work than any other cylindrical screen of like area. No one can afford to keep old traps in use when the O'Laughlin installed

NOW

will from the moment it starts give a better and larger product, and a big interest on your investment in continuous saving in cost of repairs, renewals, and power. For particulars address:

The advantages of these screens are described in detail in a circular which WE WILL MAIL TO ANY ADDRESS. Mr. John O'Laughlin, the inventor, has designed many notable improvements in rock-drilling, quarrying, crushing and screening machinery, and uses these improved screens in his own crushing plants, which others have declared "to be the most perfect in existence in every detail." The O'Laughlin Screen is an important factor in the most modern and perfect stone-crushing plant.

JOHNSTON & CHAPMAN CO.

Corner Francisco and Carroll Ave., Chicago, Ill.

Perforators of Sheet Metals, Flat, Cylindrical, and Conical Perforated Screen Plates for Quarries, Mines, Reduction Works, Mills and all Industrial Purposes.

BUFFALO WIRE WORKS CO.

BUFFALO, N. Y.

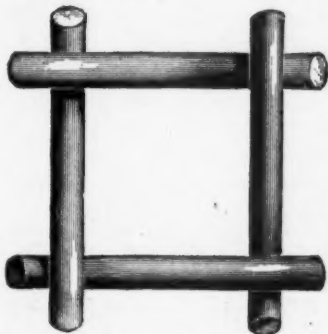
We make

Wire Cloth

From the coarsest to the finest, for all purposes,

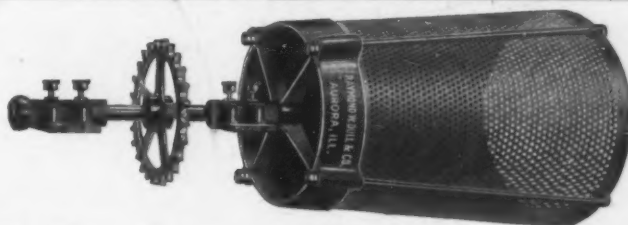
Also

WIRE CONCRETE REINFORCEMENT, WIRE WORK of all kinds, CORRUGATED WIRE "LATHING"



1-Inch Space, No. 4 Wire

Send for Our No. 416 Catalogue.



Dull's Improved Conical Screen

WE DESIGN AND CONSTRUCT COMPLETE

SAND AND GRAVEL WASHING PLANTS

We invite correspondence—Send us full particulars

RAYMOND W. DULL & COMPANY
AURORA, ILL.

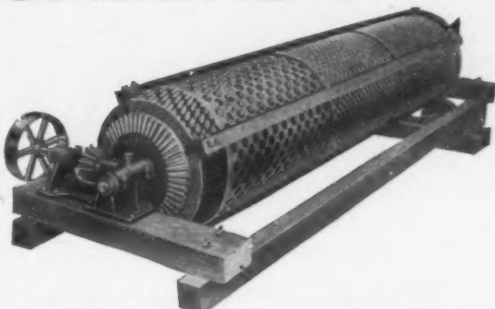
CARS — SCREENS — ELEVATORS



Buckets

Stone

Skips



Switches

Hoists

Portable
Track



We are prepared to quote you on anything for your Quarry or Gravel Plant. Before placing your order be sure and get our Catalogue 31-R, and also our Prices and Deliveries.

1679 ELSTON AVENUE

SACKETT---CHICAGO

If you are "from Missouri" or anywhere else
"We can show you."

"SACKETT" High Quality
Low Price
Prompt Delivery

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Deep Blast Hole Drilling

Is accomplished more economically than by any other method with the

"American" Drilling Machines

There is 40 years' experience behind these drills—they are standard. Where electric power is available, equipped with motor they form the most portable and economical drill for quarry use.

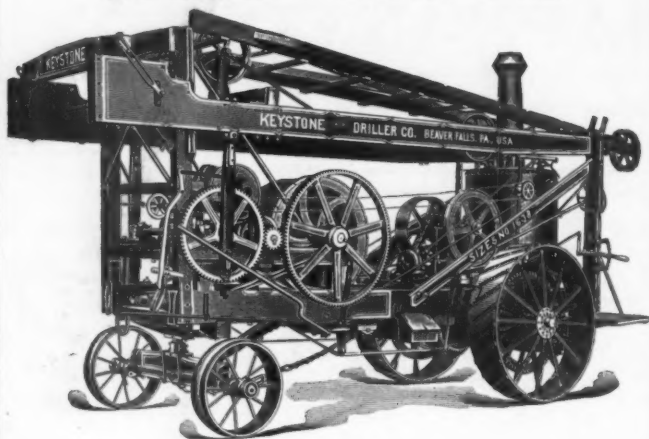
Equipped with any power they are backed by the experience and reputation of the world's oldest and largest builders of this kind of drilling machinery.

Tell us your blast hole requirements. We have 59 regular styles and sizes of machines for your selection, made in types to meet every possible condition of work. Write for our new catalog No. 105, the most complete "Drill-Hole" catalog ever issued.

THE AMERICAN WELL WORKS

General Office and Works: AURORA, ILL., U. S. A. Chicago Office: First National Bank Building

For Big Blast Holes KEYSTONE CABLE DRILLS



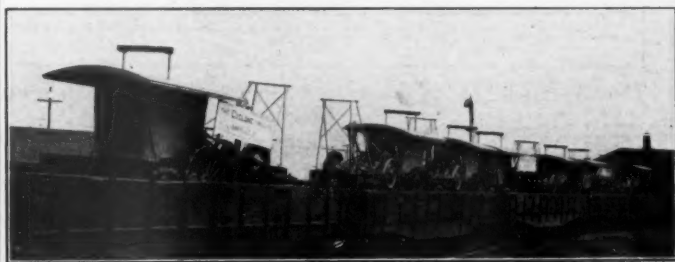
Catalog No. 4

Keystone Traction Drill Co.

Monadnock Bldg.,
CHICAGO

BEAVER FALLS, PA.,
170 Broadway, New York

CARTHAGE,
MISSOURI



Seven No. 14 Traction Drills.

THIS order was placed after trying out one of our drills for fourteen months in competition with seven machines of other makes; the seven other drills were discarded and Cyclones installed in their place.

If the Dolese & Shepard Company of Chicago found it profitable to discard the other machines and buy Cyclones you can save more than half the expense by buying Cyclone drills right from the start.

Why spend money experimenting when the other fellow has done that? We guarantee to drill more holes at less expense than any other drilling machine on the market. If you want us to prove it, just ask our competitors to meet us in your quarry.

THE CYCLONE QUARRY DRILL COMPANY

New York Office, 50 Church St.
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ORRVILLE, OHIO



HOWELLS' Celebrated Ball Bearing Heavy Geared Post Drills

For boring anything that
an Auger will penetrate.

Awarded Gold Medal, St. Louis.

We make 40 different styles machines run by Hand, Compressed Air and Electricity for boring Fire Clay, Coal, Rock, Rock Salt, Gypsum and Plaster Rock. Send today for our handsomely Illustrated Catalogue.

HOWELLS MINING DRILL CO., PLYMOUTH, PA.
U. S. A.
(ESTABLISHED 1878.)

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The Great Cost Reducer in Stripping Over-burden

from Stone Quarries, Phosphate Rock, Coal, or similar other material, and performs the entire work at a single operation without rehandling. These are the important advantages of

THE MARION MODEL 250 REVOLVING SHOVEL

This machine is provided with an extra long boom for making wide cuts and dumping the excavated material far enough to one side so that the rock or stone thus uncovered may be taken out without being partly under the spoil bank. This eliminates the handling of the over-burden in cars and reduces the labor required to the shovel crew.

The uncovered material is mined immediately following the shovel so that when it completes one cut it can return on another, this time depositing the over-burden in the open pit where the coal, for instance, has been taken out.

The Model 250 will handle over-burden of a far greater depth and width of face than the ordinary excavator.

Proof of this economy can be shown where shovels of this type are now in actual operation.

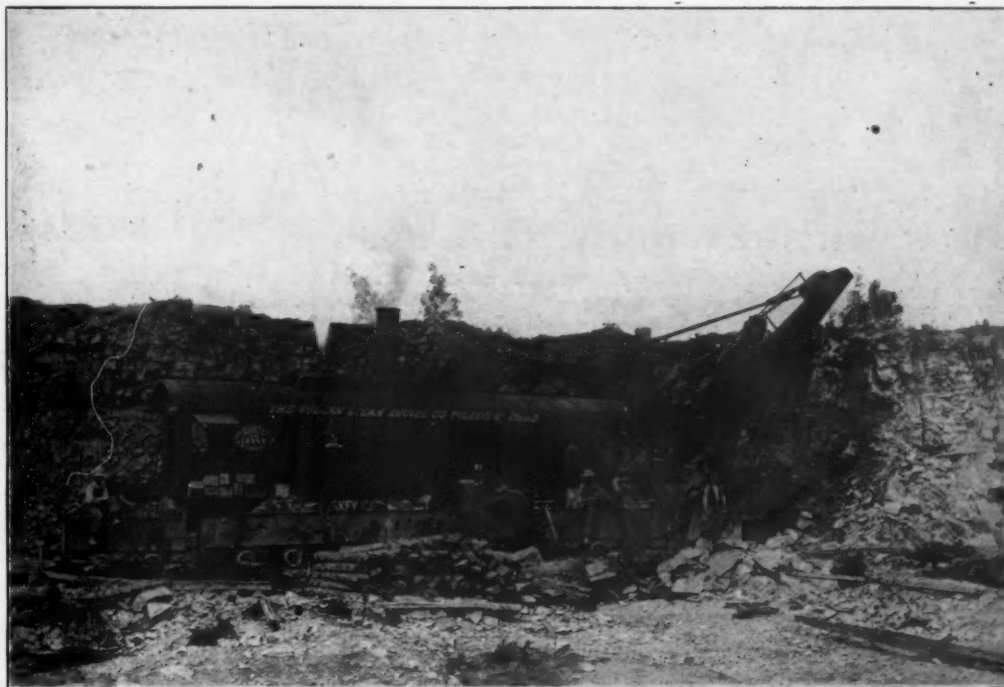
Write for Circular 250, giving more complete information.

The Marion Steam Shovel Co.
Dept. V, MARION, OHIO

CHICAGO: Monadnock Block. SAN FRANCISCO: Monadnock Bldg.
NEW YORK: 50 Church Street. MONTREAL: F. H. Hopkins & Co.
SEATTLE, WASH.: E. P. Jamison & Co.



QUALITY SHOVELS



THE SUPERIOR QUALITY of VULCAN SHOVELS is the result of years of experience.

There is nothing in excavating work that the VULCAN has not done.

The investment necessary to buy the best shovel for your purpose, demands an investigation. The VULCAN will be your first choice and your purchase.

VULCAN shovels are built in all standard sizes from 22 to 120 tons.

Revolving types in three sizes, 15 to 40 tons.

Railroad and Traction wheels, Steam or Electric Power.

We also build special High-Boom Stripping Shovels, Locomotive Cranes and Dipper Dredges.

Our catalogue and knowledge of excavating problems is yours for the asking.

THE VULCAN STEAM SHOVEL CO., Toledo, O.

EASTERN OFFICE, 50 CHURCH STREET, NEW YORK

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INDUSTRIAL LOCOMOTIVES BUILT FOR SPECIFIED SERVICE



Locomotives for contractors, quarrying and switching around mines and industrial plants must be designed for the specified service. To do their work successfully the design must be based on accumulated experience of years of study and investigation. This experience should be applied to specific service conditions. The design must be well balanced and of the right proportions for the work. It must incorporate all and only those features which have proven successful in actual service.

Our locomotives meet these requirements. They are designed by engineers with a thorough

knowledge of the conditions in the fields where locomotives are used.

Tell us your conditions and let us suggest a locomotive that will exactly suit your needs.

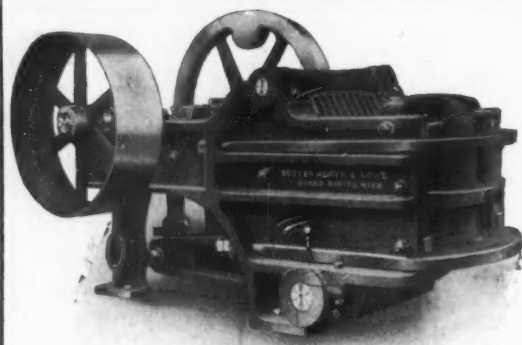
AMERICAN LOCOMOTIVE COMPANY

30 CHURCH STREET, NEW YORK

McCormick Building, Chicago
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N. B. LIVERMORE & CO., Salt Lake City; San Francisco; Seattle; Portland, Oregon

401 Board of Trade Building, Scranton
41 Ottawa Bank Bldg., Montreal, Canada



Nippers—17 x 19", 18 x 26", 20 x 30" and 24 x 36".

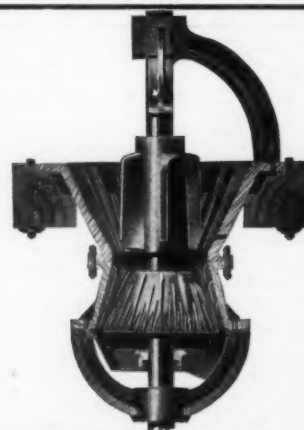
Jaw and Rotary CRUSHERS

For all Rocks and Ores Softer than Granite

GYPSUM MACHINERY—We design modern Plaster Mills and make all necessary Machinery, including Kettles, Nippers, Crackers, Buhrs, Screens, Elevators, Shafting, etc.

Special Crusher-Grinders for Lime

Butterworth & Lowe
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Crackers—5 sizes—many variations.

GET THE BEST Finest Line of Gypsum Machinery

MADE

KETTLE CRUSHER NIPPERS

ASK FOR CATALOG OF

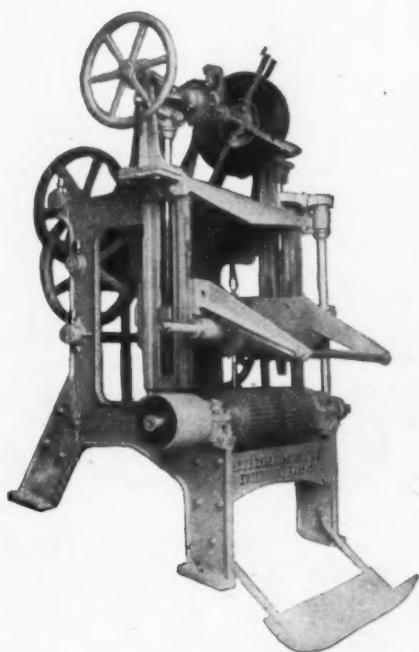
MOGUL NIPPERS, OPEN DOOR POT CRUSHERS

Best Mills in the United States Have Them

MCDONNELL BOILER & IRON WORKS, Des Moines, Iowa, U. S. A.

"Formerly Des Moines Mfg. & Supply Co."

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Points of Interest Concerning The Ehram Wood Fibre Machine

The log feeds itself to the saw. As the log decreases in diameter the Speed of the log and of the feed **INCREASES AUTOMATICALLY**. In other words, the Peripheral Speed remains constant. The feed of the log to the saw is in direct proportion to the speed of the log. This automatic uniformity of feed **INSURES UNIFORMITY** of **FINE-NESS** in the **PRODUCT**.

No frictional devices are used, none being necessary.

All the working parts are planed. All of the gears are cut from solid steel. All of the parts are interchangeable and numbered, so that duplicate parts can be quickly obtained and easily put in position.

The Saw mandril is extra heavy and made of the best crucible steel.

The journals are chain oiling. No machine can be more substantially built. Write for full information.

J. B. Ehram & Sons, Enterprise, Kans.,

Gentlemen:—Some time ago I received a letter from you asking how the wood fibre machine you shipped us is doing. Will say it is the best I ever used. In regard to any suggestions I could make as to how it might be improved, will say that I can make none, as it is O. K.

Yours truly,

SOUTHWEST CEMENT PLASTER CO.,

Okeene, Okla., June 14, 1911.

Frank Dodge, Sup't.

Manufacturers of Jaw and Rotary Crushers for Gypsum, Vibrating Screens, Hair Pickers, Wood Fibre Machines, Calcining Kettles, Plaster Mixers, Power Transmission

The Enterprise Vertical Burr Mill

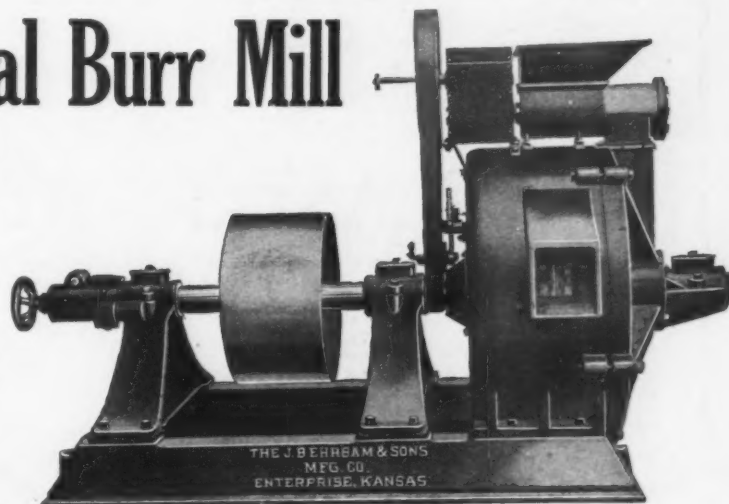
is especially designed for grinding gypsum, lime-stone, coal, coke, paint, rock, foundry facing, carbon, salt, and other similar substances.

It is **STRONG** and **DURABLY** built.

Has **INTERCHANGEABLE STONES**, which can be easily removed for dressing and replaced.

Is provided with our **POSITIVE CONTROLLABLE FEEDER**, which feeds an absolutely uniform stream into the mill at the required capacity.

**MANY OTHER
ADVANTAGES.**



The J. B. Ehram & Sons Mfg. Co.

Designers and Builders of

Complete Equipment for Plaster Mills

ENTERPRISE, KANSAS, U. S. A.

Tell 'em you saw it in **ROCK PRODUCTS**

Improved
Modern
Lath



Fire-Proof
Insulating
Sound-Deadening

King's Fibrous Plaster Board

Standard Size 32' x 36'

THE RESULT OF "TRADE DEMANDS"

STRENGTHENED to stand the GREATEST STRAIN to which such material is subjected
TOUGHENED to a woody consistency to stand NAILING AND HANDLING

SHIPMENTS made to dealers of STRAIGHT OR MIXED CAR LOADS

KING'S FIBROUS PLASTER BOARD

CALCINED PLASTER
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NEAT WALL PLASTER
SANDED PLASTER
MARBLE DUST

PLASTER BOARD NAILS

SERVICE The location of our works at the greatest railroad terminus in the East and our several warehouses enable us to make **Prompt Shipments at all times.**

J. B. KING & CO.

Plaster Board Department:
17 State Street, New York, N. Y.

WAREHOUSES:
Boston, Mass. Providence, R. I.
Chester, Pa. Hartford, Conn.
Norfolk, Va. Buffalo, N. Y.
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WORKS:
New Brighton, Staten Island,
NEW YORK

Tell 'em you saw it in ROCK PRODUCTS

Dakota Plaster Co.

WE MAKE THE FAMOUS

"Black Hawk"

AND

"Dacotah"

**Hair and Wood Fibred
Plaster**



Our Plaster is pure white; uniform in color; carries more sand, works easier and makes the hardest wall. Our Mill is thoroughly equipped with the most modern machinery, and we are always in a position to make prompt shipment. We guarantee every sack of our plaster.

Dakota Plaster Co. Rapid City, S. D.
Black Hawk, S. D.

CUMMER CONTINUOUS PROCESS

FOR

**CALCINING
GYPSUM**

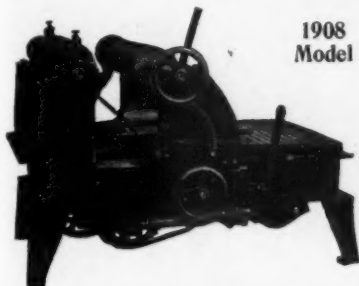
NO KETTLES
USED

PLANTS IN
OPERATION

Great Saving in Cost of Manufacture and Quality of
Product Guaranteed.

The F. D. CUMMER & SON CO., Cleveland, O.

The Shuart-Fuller Improved Fiber Machine



1908
Model

Has an automatic, proportional increasing feed, which keeps grade of fiber uniform from start to finish, and holds machine to highest possible rate of production for the grade of fiber and number of saws. Does not begin with fiber and end with dust, nor fall off in rate of production on each log, from 40 to 80 per cent as do the ordinary non-increasing feed machines. Works logs up to 24x24 inches. No royalty string attached to sale. Pay no attention to misrepresentations of our competitors, but write for descriptive circular and terms to

The Shuart-Fuller Mfg. Co.

ELYRIA, OHIO

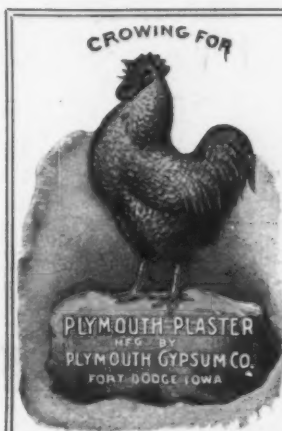
THE SHUART-FULLER CO., Elyria, Ohio.

Gentlemen:—We are just in receipt of advice from our New Mexico plant wherein they state that the Wood Fiber Machine recently shipped by you is doing all that we have asked of it and running very fine.

ACME CEMENT PLASTER CO.

St. Louis, June 17, 1907.

By Jas. R. Dougan, Sec.



**PLYMOUTH PLASTER
WOOD FIBER PLASTER
PLYMOUTH FIREPROOF
PARTITION BLOCKS
PLASTER BOARD
STEEL STUDDING**

THE QUALITY BRANDS

WRITE US FOR PRICES AND
ADVERTISING MATTER

Plymouth Gypsum Co.

Fort Dodge, Iowa

THE NATIONAL RETARDER CO.

Mills at

**Webster City, Iowa
Port Clinton, Ohio**

Successors to

The Chemical Stucco Retarder Co.

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The Binns Stucco Retarder Co.

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The same standard quality of retarder will be produced and marketed by the same people at the right price—only a change in name of corporation.

MAIL ORDER TO NEAREST MILL FOR PROMPT SERVICE

Tell 'em you saw it in ROCK PRODUCTS

= NIAGARA =

Wall Plasters Have Greater Covering Capacity, Work Smoother Under the Trowel and Have Greater Final Strength

Niagara Neat Cement

Niagara Sanded Mortar

Niagara Wood Fiber (Wood Pulp)

in 100-lb. Jute Sacks and 80-lb. Rope Paper Sacks. Mixed Car Loads of Wall Plasters, Hydrated Finishing Lime, Plaster Board, Land Plaster and Calcined Plaster for Finishing Purposes. These Products Mean Money to the Dealers in Builders' Supplies. Write today for prices.

NIAGARA GYPSUM COMPANY
BUFFALO, NEW YORK

ATTENTION! ARCHITECTS & DEALERS

"IT SPREADS LIKE BUTTER"

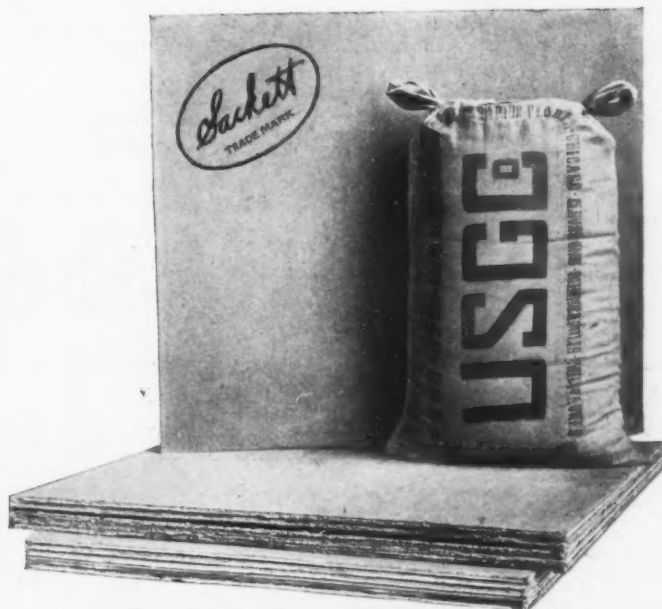
Which? = **"Wheeling"**

Why? = { **Better Walls**
Best Service
Right Prices

We want to make this, our tenth year in business, the biggest and best of all, both for our customers and ourselves mutually. Write us, Results will follow. Our Booklet "Better Walls" for the asking.
WILL YOU JOIN THE "WHEELING" FAMILY?

Wheeling Wall Plaster Co., Wheeling, W. Va.

THE LINE OF PROGRESS



The Logical Lathing Material
The Best in Hard Wall Plaster



Pyrobar Gypsum Tile
The Most Efficient and Economical Material Available for
Fireproof Partitions, Column Covering, Etc.



A Gypsum Fireproof Stud—
Handled Just Like Wood Studding. Used in Connection with
Sackett Plaster Board—An Ideal Combination, Affording a
Light Fireproof Partition for Private Residences, Schools, Etc.

U. S. GYPSUM PRODUCTS
embrace a line of material of
rapidly growing interest value
and utility in the building
trades.

SACKETT PLASTER
BOARD

U. S. GYPSUM WALL
PLASTERS

U. S. GYPSUM FINISHING
PLASTERS

ADAMANT EXTERIOR
PLASTERS

PYROBAR GYPSUM TILE
GYPSINITE STUDS

The U. S. Gypsum line—"The Line
of Progress"—is unusually attrac-
tive, and affords unrivalled advan-
tages to the U. S. G. Dealer.

U. S. G. PRODUCTS AND METHODS
WILL INCREASE YOUR BUSINESS AND
PROFITS, AND ENABLE YOU TO GIVE
GREATER SATISFACTION TO YOUR
TRADE.

Our interests are mutual—justice to your
own best interest requires that you give us
an opportunity to prove up. We are will-
ing to put our time against yours. Tell us
to submit the proof.



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PEERLESS

means without an equal and that is what our products are beyond the shadow of a doubt.

Peerless Plaster-Board

The Best on the Market To-day

Peerless Plaster Board has no superior on the market today. Strength, durability, and uniformity in thickness with clean cut edges are its chief virtues.

Peerless Plaster Board finished with Peerless Plaster make a Peerless Wall. Builders' Supply Retailers say it is the best Plaster Board manufactured. If you are "from Missouri" write us today for sample and prices.

Write today for our
PEERLESS PROPOSITION



Peerless Cement Plaster
Peerless Wood Fibre Plaster
Peerless Sanded Plaster
Peerless Ready Finish
Peerless Portland Stucco
(Exterior Plastering)

We Ship Mixed Cars
of Plaster and Board

Peerless Plaster Board comes in sheets 32 inches by 36 inches.

Peerless Plaster Board is a fire retardant and an efficient sound deadener.

Peerless Plaster Board is a non-conductor of heat and cold.

Peerless Plaster Board is an insurance against cracks, buckles, and lath strains.

Get in line with
THE PEERLESS LINE
WRITE TODAY

M. A. REEB, : Buffalo, New York

KING'S WINDSOR CEMENT FOR PLASTERING WALLS AND CEILINGS

Buffalo Branch, CHAS. C. CALKINS, Manager
322 W. Genessee Street.

Not the hardest, but the toughest and best Wall Plaster made—Can be applied with less labor. Has greater covering capacity than any other similar material

J. B. KING & CO., 17 State Street, New York.

NO OCCASION TO WORRY

IF YOU USE

ILLINOIS LEATHER COMPANY'S
HAIR

EITHER CATTLE OR GOAT

STRENGTH—UNIFORMITY—RELIABILITY

WRITE FOR SAMPLES AND PRICES

930 NORTH HALSTED STREET
CHICAGO, ILL.



There's one "best" in every line, but that is not always best for everyone concerned. In the building trades

Ricketson's Mineral COLORS

are acknowledged to be the best choice for everybody. Best for the architect because purest. Best for the contractor because they go farther. Best for the owner because they never change their color.

For Mortar, Brick, Cement, Stone, Etc.
Red, Brown, Buff, Purple and Black

RICKETSON MINERAL PAINT WORKS MILWAUKEE, WIS.

Whenever You Wish to

Sell Your Stock, to Dispose of Your Old Machinery, Wish an Employee, or Want a Position,

REMEMBER that ROCK PRODUCTS can do this
for you promptly.

Tell 'em you saw it in ROCK PRODUCTS



PLANT OF A. L. DE SHAZO, MEMPHIS, TENN.

Miracle Pipe and Tile Molds

are used Exclusively at the above plant, which is a

MONEY MAKER

\$15,000 Cleared above all expenses last year

Miracle Molds Spell Success

Wherever Miracle Molds are used, satisfaction always results.

Perfect work is assured. The price is right.

Thousands in use.

Standard molds of every size in stock, and molds for special purposes made promptly to order.

Write for our 28 page Sewer Pipe Catalog or
our big Catalog on all lines of machinery.

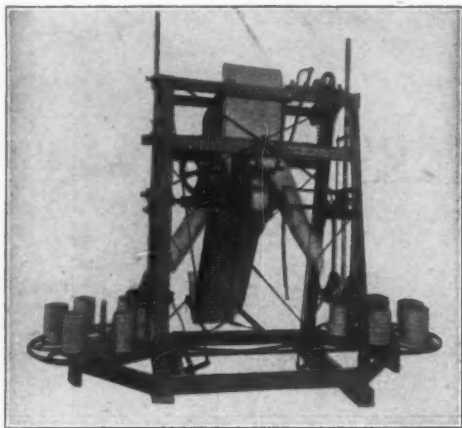


MARSH COMPANY

971 Old Colony Bldg., Chicago, Ill.

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THE McCracken Double Tile Machine



The McCracken Double Tile Machine makes all sizes of cement tile from 4 to 16 in. in diameter at the rate of from 10 to 20 tile per minute. Also makes building blocks or construction tile 8x8x16 at the rate of 2000 to 3000 per ten hour day.

The machine will make two different sizes of tile at the same time or building blocks and tile at the same time, or either end of machine can be used without using the other.

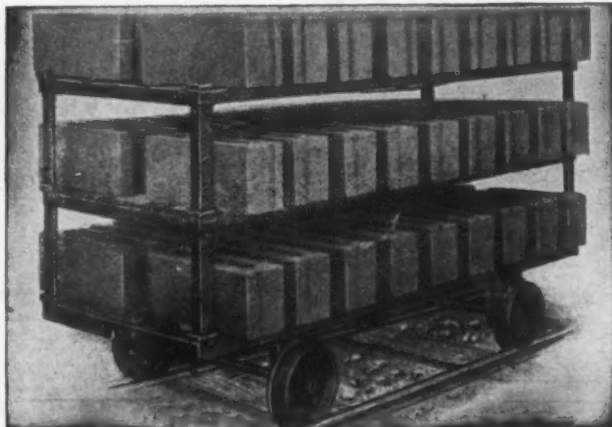
The machine has no cans and runs just as smooth at high speed as when running slow. Takes less labor per 1000 tile than any other machine.

Tile are packed so hard that the large sizes can be carried without the use of pallets. Machine is very simple and strong and runs very light, and elevator can be started and stopped without stopping the machine.

See the McCracken Machine before you buy. Write to

The Sioux City Cement Machinery Company
219 4th Street, SIOUX CITY, IOWA

The Chase Roller Bearing Car FOR CEMENT, BLOCK AND TILE



**BOTTOM AND SIDE DUMP CARS, TRANSFER
CARS, TURNTABLES, SWITCHES, ETC.**

You cannot afford to overlook the necessity of handling your material and product as economically as your competitor. Our goods will help you do this.

WRITE US FOR CATALOG AND PRICES

The Chase Foundry and Manufacturing Co.
COLUMBUS, OHIO

It Pays to Advertise in ROCK PRODUCTS

Seeing is Believing and
Trying is Convincing

M. J. FULLER, President

M. B. FULLER, Vice President

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Manufacturers of
The Improved Fuller Wood Filter
Machines

The Fuller Force Feed Oil Pump

Fuller Metallic Packing
For All Purposes

Special Machinery Designed
and Built

The
Shuart-Fuller Manufacturing Company
INCORPORATED

Telephone 215

Elyria, Ohio, 5/9/10

RECEIVED
ANSWERED
1910

The Francis Publishing Co.,
Chicago, Ill.

Gentlemen:

Replying to your inquiry of the 3d inst., we are compelled to say that the "Rock Products" is the best advertising medium for our line of business that we have been able to find, in fact we can safely say that 90% of our new customers are obtained through our advertisement in the "Rock Products"

Yours truly,

THE SHUART-FULLER MFG. CO.

E. J. Fuller
Secy & Treas.

ESTABLISHED 1878

FRANKLIN B. SPRY, Manager & Gen. Rep.

JOHN A. OPP, Secretary

ASA H. DEWITT, Treas.



AWARDED
"GOLD MEDAL"
FOR SUPERIOR EXCELLENCE
WORLD'S FAIR
ST. LOUIS 1904

Howells Mining Drill Co.
Manufacturers of
Mining Drills of Every Known Description
Plymouth, Pa., U.S.A.



WIRELESS LAMP TELEGRAPHIC CODE SYSTEM
CABLE ADDRESS "HOWELLS PLYMOUTH"

May 9, 1910.

The Francis Publishing Company,
"Rock Products",
Chicago, Ill.

Gentlemen:

We have been advertising with you people continuously since 1906 and have found your publication very valuable to us. We have noted with interest the steady growth of this publication and the interest you have always taken in our behalf has been greatly appreciated.

Yours very truly,
Howells Mining Drill Company.
Franklin B. Spry
President & Gen. Manager.

FBS/DM

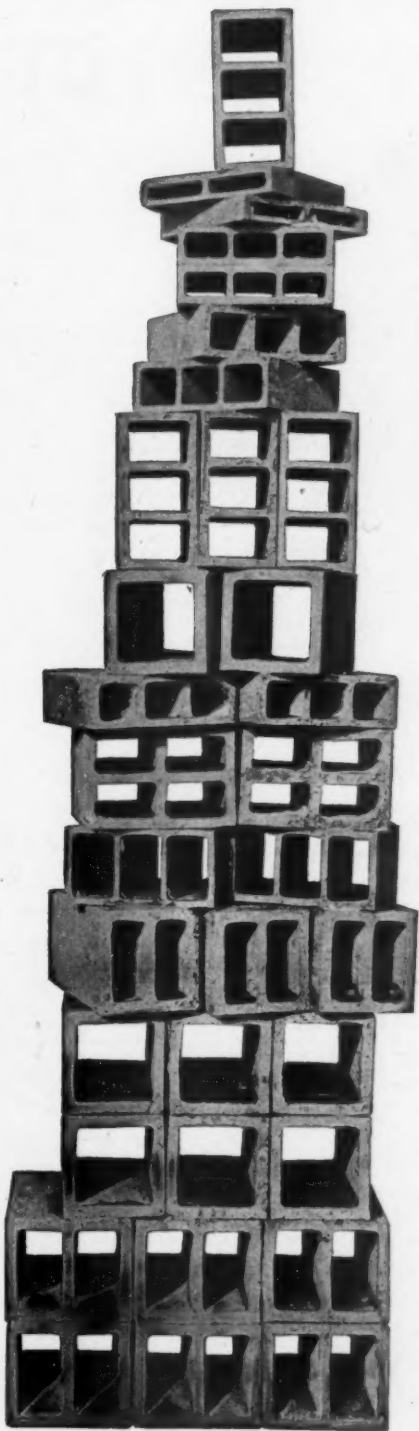
CLINTON METALLIC PAINT CO.
CLINTON, N. Y.

LARGEST AND OLDEST MANUFACTURERS OF
BRICK AND MORTAR **COLORING**

Be sure you get the genuine with the "Little Yellow Side-Label" on each package

Let us tell you about Side-Walk Black.

Tell 'em you saw it in ROCK PRODUCTS



Has The First *Pauly* Concrete Tile Plant Been Successful?

This question, which is usually first asked us by interested parties, is best answered by two facts:—1. During the year of 1909, the demand in Youngstown, Ohio, could not be satisfied, and (2) the plants capacity output is sold until the middle of the summer of 1910, in the City of Youngstown alone. In this connection it might be stated also that 4 tiles of our most common size, 8x8x16, can be manufactured from one cubic foot of concrete, with a labor cost of 50 per cent of the cost of concrete anywhere east of the Mississippi.

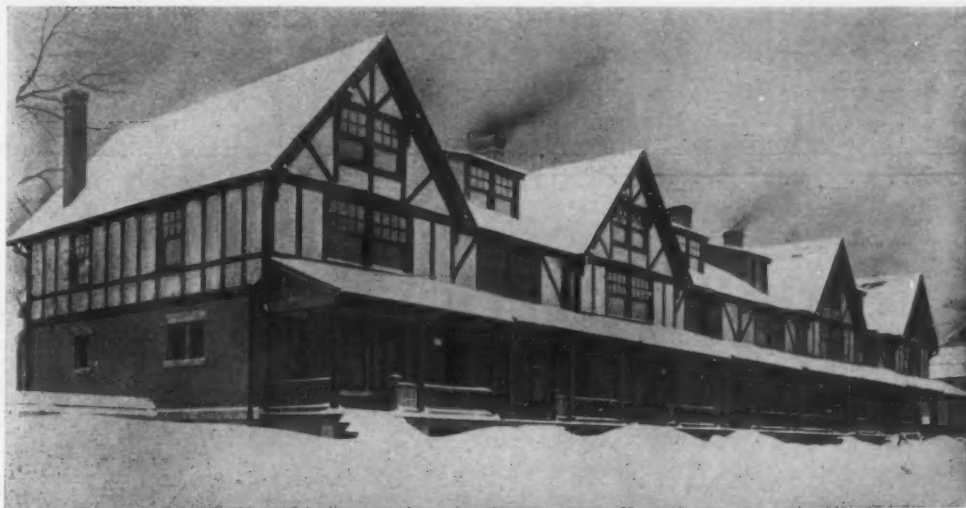
A weatherproof home of fireproof material can now be built for almost wooden construction cost. These points have been clearly demonstrated in Youngstown by practical use of *Pauly* Concrete Structural and Fireproofing Tile, in a variety of buildings. The result gained has not only been a financial success, but also an enviable position in the estimation of the entire building public.

Persons interested in this practical and profitable phase of the concrete business, are always welcome by the The Concrete Stone & Sand Co., Youngstown, Ohio, where they will be shown every detail of the initial factory.

Our Catalog

Gives the method of manufacture, fire and compression test data, and the endorsements of local architects and other building authorities. Also many other articles and illustrations of interest to the general public. May we send you, postpaid, a copy of our Catalog?

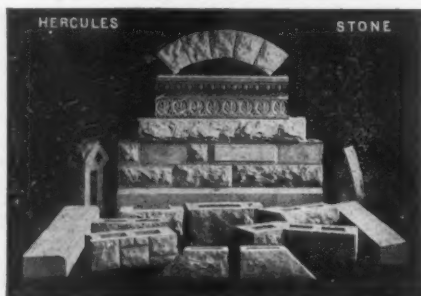
The Concrete Stone & Sand Co.
Youngstown, Ohio.



Tell 'em you saw it in ROCK PRODUCTS

Hercules Blocks

Sell on Sight



The dense non-porous blocks of Cement Stone made on

Hercules Block Machines

satisfy the eye of the most critical architect or house builder. It is one of the chief merits of the Hercules Machine that it permits blocks to be made of WET concrete. This results in greater density, greater strength and greater water proofness. The Hercules is the only machine that expands with the requirements of your business. The only machine that makes dimension stone up to Six Feet long.

The Hercules is built upon one solid frame 6 feet long. If your demand is just for an 8x8x16 block, you only need the mould box for that size. As your trade increases, you merely add new plates to be attached to your original machine. You don't have to buy a new machine every time you wish to make a different size. There are many other points connected with Hercules machines you ought to know. These are fully told in a "little book" we have just issued. Send for it today.

Century Cement Machine Co.

288-298 St. Paul St., Rochester, N. Y.

PERFECTION IN BLOCK MAKING

If you wish to attain this you should combine these three important features:

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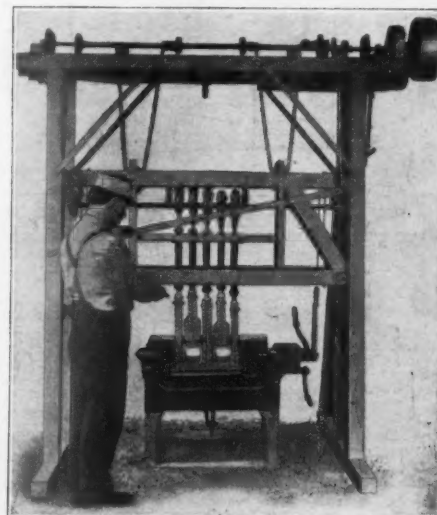
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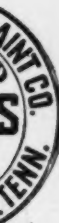
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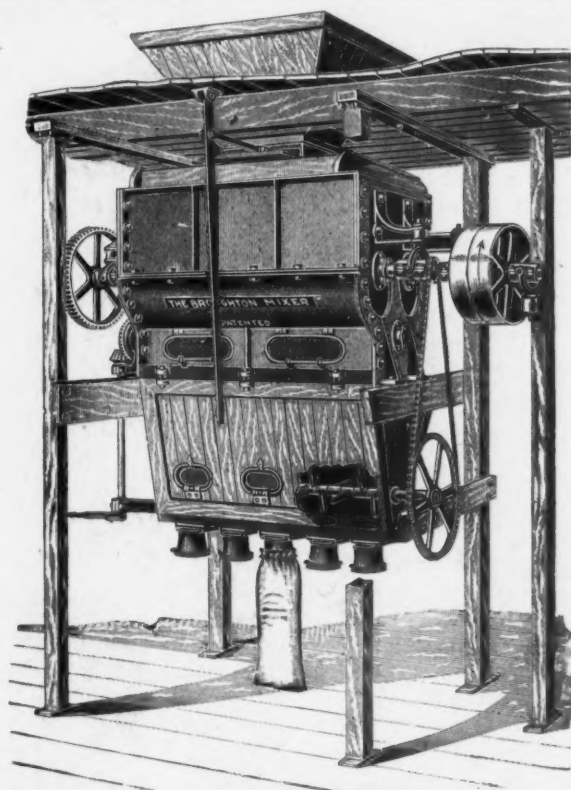
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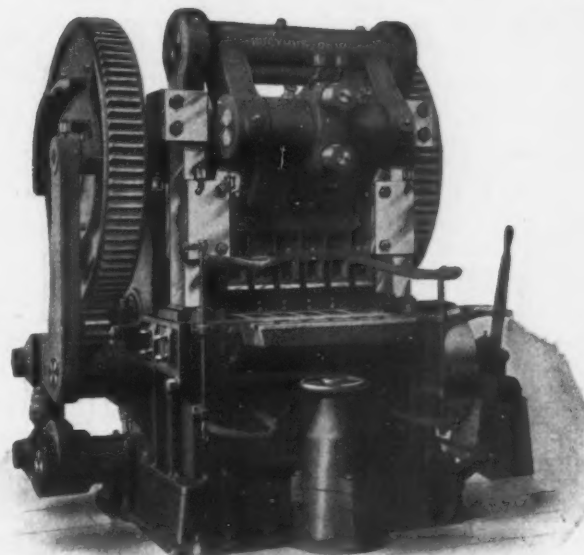


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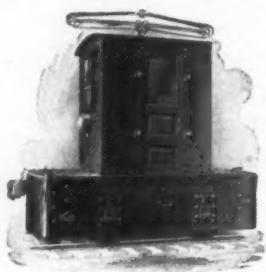
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